

19971031.qrp v00_n895.qrs.971031

Date: Fri, 31 Oct 1997 19:04:14 EST
From: qrp-l@Lehigh.EDU
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: QRP-L digest 895

QRP-L Digest 895

Topics covered in this issue include:

- 1) [29978] 2222 Building Contest
by camqrp@cyberg8t.com (Cam Hartford)
- 2) [29978] Re: 2222 Building Contest
by Paul Harden <pharden@aoc.nrao.edu>
- 3) [29979] How do I unsubscribe/subscribe?
by Jim W7LS <w7ls@brigadoon.com>
- 4) [29979] Re: 2-WIRE YAGI??
by Jack Meadows <jackmead@getnet.com>
- 5) [29979] FOX: N0UR Fox log
by Jim/N0UR <LAGESON@worldnet.att.net>
- 6) [29980] 30 meter OHR Sprint II for sale
by Karl Heimbach <heimbach@concentric.net>
- 7) [29981] Re: 2N3055 Current Share Resistors
by n3fel@juno.com (Howard D Rubin)
- 8) [29982] cloudburners
by "L. B. Cebik" <cebik@utkux.utcc.utk.edu>
- 9) [29982] Re: Norcal paddle notes - Some thoughts.....
by gsurrency@juno.com (Gary L L Surrency)
- 10) [29982] Re: Norcal paddle notes
by "Robert P. Okas" <vintage@best.com>
- 11) [29983] 2222 contest and G-QRP Circuit Handbook
by "Bill Kelsey - N8ET - Kanga US" <kanga@bright.net>
- 12) [29984] FOX: Finally got a N/T+
by Bill Myers <bjmyers@arc.net>
- 13) [29984] My static problem...
by Bill Myers <bjmyers@arc.net>
- 14) [29985] Computer generated noise help wanted.
by "Gary M. - W2UX" <mail4gary@worldnet.att.net>
- 15) [29986] Re: 2N3055 Current Share Resistors
by n5inz@juno.com (John M Andrews)
- 16) [29986] First FOX!!! YaHooo
by Michael <MichaelN@cycat.com>
- 17) [29987] N/T+ fox, gotem!
by mikemo@ibm.net
- 18) [29988] 2N2222 Project ideas - sidetone osc
by gsurrency@juno.com (Gary L L Surrency)
- 19) [29989] dummy on dummy loads

by mikemo@ibm.net

20) [29988] Re: Computer generated noise help wanted.
by "W. Daniel, 9V1ZV" <daniel@pandora.lugs.org.sg>

21) [29989] Attention Minnesota QRP'ers!
by "Claton Cadmus" <aplitech@Spacestar.Net>

22) [29990] W2MBY N/T FOX
by gsurrency@juno.com (Gary L L Surrency)

23) [29991] N/T+ Fox (Got him)
by David Bixler <qrp@netins.net>

24) [29992] FS 6 mtr gear
by W7GVN@aol.com

25) [29991] Re: 2222 design ideas
by DYARNES <DYARNES@aol.com>

26) [29992] W2MBY N/T FOX
by "Wilford D. Lindsey" <70511.3041@compuserve.com>

27) [29993] RE: 38 Special cases
by "mahlon.r.haunschild" <mahlon.r.haunschild@ac.com>

28) [29994] N/T+ fox, gotem!
by "Wilford D. Lindsey" <70511.3041@CompuServe.COM>

29) [29995] First FOX!!! YaHooo
by "Wilford D. Lindsey" <70511.3041@CompuServe.COM>

30) [29996] Re: Oscillator using MAR/ERA
by Leon Heller <leon@lfheller.demon.co.uk>

31) [29997] RE: Copper to Aluminum, HOW?
by "Carlos J. Caro" <cjcaro@classic.msn.com>

32) [29998] DATA SHEETS: 2N2222 et. al.
by Paul Harden <pharden@aoc.nrao.edu>

33) [29999] Re: Dummy loads and resistors
by Ed Tanton <n4xy@bellsouth.net>

34) [30000] Re: No Change in NorCal 2222 Contest Rules
by Paul Harden <pharden@aoc.nrao.edu>

35) [30001] two wire yagi
by Terres Family <terresfm@ncia.net>

36) [30002] Re: dummy loads and resistors
by FAITHD@dnr.state.wi.us (Don C. Faith III, AM/7, \ (608\) 267-3135)

37) [30003] Re: Antenna Help
by Rogerio Gonzaga <gonzaga@med.up.pt>

38) [30004] Re: Norcal 2222 Design Contest
by Dave.Ackrill@LotusXchgPG.powergen.co.uk

39) [30004] WTB:Kenwood TS930
by "Wilford D. Lindsey" <70511.3041@compuserve.com>

40) [30004] MPS2222As at AmeriTech
by "Harley L. Miller" <hmliller@sound.net>

41) [30005] Whoops !?
by Dave.Ackrill@LotusXchgPG.powergen.co.uk

42) [30006] W2MBY
by "Rattray, Bruce" <Rattray@siast.sk.ca>

43) [30007] Re: Saturday NorTex Meeting

by Vic Rosenthal <rakefet@rakefet.com>
44) [30008] DON'T SHOOT THE MESSENGER!
by ARDUJENSKI@aol.com
45) [30009] UR3IDD
by aa8yo@tir.com (Bob Fox)
46) [30010] NorCal Paddle Powder Coated Base Information
by Jess Gypin <jgypin@bi.com>
47) [30011] Re: [DX] Last two
by "Ron Smith" <resmith@primenet.com>
48) [30011] 2222 design
by Steven Weber <kd1jv@moose.ncia.net>
49) [30012] How do I protect my HB projects with a diode??
by "JakeCart" <JakeCart@ix.netcom.com>
50) [30013] Black Widow
by Stephen Gibson <SWGibson@worldnet.att.net>
51) [30014] Anyone have pics on web for new Paddle Powder Coated Bases?
by "Kevin F. Glynn" <kfglynn@prodigy.net>
52) [30015] Doc/TS-930
by Bill Morris Denton <bdenton@tenet.edu>
53) [30016] Re: How do I protect my HB projects with a diode??
by K5BDZ@aol.com
54) [30017]
by Dave.Ackrill@LotusXchgPG.powergen.co.uk
55) [30018] Fox tales
by "Rattray, Bruce" <Rattray@siast.sk.ca>
56) [30019] Re: 2222 design
by n5inz@juno.com (John M Andrews)
57) [30020] Ten-Tec T-Kit 1203
by n4so@juno.com (charles k brown)
58) [30021] Re: How do I protect my HB projects with a diode??
by Arjen Raateland <Arjen.Raateland@vyh.fi>
59) [30022] Re: Computer generated noise help wanted.
by "S. Lee" <slee@u.washington.edu>
60) [30022] W3Gate Web Access via email
by n4so@juno.com (charles k brown)
61) [30023] RE: Copper to Aluminum, HOW?
by Frank McCrackin <wb6lma@cdsnet.net>
62) [30024] Sunspots
by adams@chuck.dallas.sgi.com (Chuck Adams)
63) [30025] Re: Computer generated noise help wanted.
by Andy Fox <foxes@theriver.com>
64) [30025] Re: How do I unsubscribe/subscribe?
by Ed Loranger <we6w@qsl.net>
65) [30025] Source for 2222s
by "David Maliniak" <dmaliniak@penton.com>
66) [30026] RE: PS Protection using series Power MOSFET
by Ed Tanton <n4xy@bellsouth.net>
67) [30027] Re: How do I protect my HB projects with a diode??

- by Ed Tanton <n4xy@bellsouth.net>
- 68) [30028] Re: Spud guns, nuke-you-lur silos & a slingshot
by Raventhorne <jelder@ix.netcom.com>
- 69) [30028] Re: Resonance (was: Re: 10 MHz/UTC Receiver)
by Raventhorne <jelder@ix.netcom.com>
- 70) [30029] Capacitor Temperature Ratings
by Andy Fox <foxes@theriver.com>
- 71) [30030] Re: Computer generated noise help wanted.
by Ed Tanton <n4xy@bellsouth.net>
- 72) [30031] Re: dummy on dummy loads
by Steven Weber <kd1jv@moose.ncia.net>
- 73) [30031] Re: Saturday NorTex Meeting
by adams@chuck.dallas.sgi.com (Chuck Adams)
- 74) [30032] How to contact Wilderness Radio?
by Steve Galchutt <n0tu@webaccess.net>
- 75) [30033] SS e-mail filing
by "Christopher Moore" <christopher.moore@snet.net>
- 76) [30033] NorCal 2222 Design Contest Articles
by ki6ds@dpol.k12.ca.us (Hendricks, Doug)
- 77) [30034] Re: Norcal paddle notes - Some thoughts.....
by Ed Loranger <we6w@qsl.net>
- 78) [30033] Wandering keys, again.
by Frank G3YCC <g3ycc@gqrpclub.demon.co.uk>
- 79) [30034] SMT 2222's
by Steven Weber <kd1jv@moose.ncia.net>
- 80) [30033] Help:Lost E-Mail re TS930
by "W. D. Lindsey" <70511.3041@compuserve.com>
- 81) [30033] Re: Sunspots
by Monte Stark <ku7y@sage.dri.edu>
- 82) [30033] Re: NorCal 2222 Design Contest Articles
by Monte Stark <ku7y@sage.dri.edu>
- 83) [30034] re: 2222 contest
by "Phil, K6LS" <k6ls@amsat.org>
- 84) [30033] QRP Dinner Attended!
by "Scott Rosenfeld [NF3I]" <ham@w3eax.umd.edu>
- 85) [30034] [TenTec] For Sale - Mint 962, 700C
by PaulKB8N <PaulKB8N@aol.com>
- 86) [30035] Autek RF-1
by Bob Tellefsen-CNSE97 <Bob_Tellefsen-CNSE97@email.mot.com>
- 87) [30033] Re: Wilderness Radio
by Steve Galchutt <n0tu@webaccess.net>
- 88) [30033] N/T Fox W2MBY....almost
by Bill Howell <bhowell@mail.utexas.edu>
- 89) [30034] Update on ARK4
by n4js@amsat.org
- 90) [30034] FOX: STATE STANDINGS 1997/98 FOXHUNT
by Chris Cartwright <ccart@dns.vidtel.com>
- 91) [30035] N1PWU's Offer

by adams@chuck.dallas.sgi.com (Chuck Adams)
92) [30036] Re: FOX: N0UR Fox log
by N9DD@aol.com
93) [30037] Looking for 2222 Moses
by ki6ds@dpol.k12.ca.us (Hendricks, Doug)
94) [30038] LIST: 2N2222 Equivalents
by Paul Harden <pharden@aoc.nrao.edu>
95) [30039] Fox alert: next week's fox
by "Michael A. Gipe" <mgipe@reliablemeters.com>
96) [30040] Re: Autek RF-1
by Sandy W5TVW <ebjr@worldnet.att.net>
97) [30041] Re: FOX N/T Monday CORRECTION
by dhlaute@juno.com (David H. Lauten)
98) [30042]
by Paul Harden <pharden@aoc.nrao.edu>
99) [30042] Re: Resonance (was: Re: 10 MHz/UTC Receiver)
by Leon Heller <leon@lfheller.demon.co.uk>
100) [30043] Re: Looking for 2222 Moses
by Robert Bayha <rbayha@ix.netcom.com>
101) [30044] Re: Little Emmy
by Bob Tellefsen-CNSE97 <Bob_Tellefsen-CNSE97@email.mot.com>
102) [30045] Discret CA3028 how to
by Steven Weber <kd1jv@moose.ncia.net>
103) [30046] RE:TS930--Thanks!
by "Wilford D. Lindsey" <70511.3041@compuserve.com>

Date: Thu, 30 Oct 1997 16:04:17 -0800 (PST)
From: camqrp@cyberg8t.com (Cam Hartford)
To: qrp-l@Lehigh.EDU
Subject: [29978] 2222 Building Contest
Message-ID: <199710310004.QAA27620@key.cyberg8t.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Doug -

So does this mean I can't use that box of 2N3904s I picked up at the swap meet about two years ago? Like about a hundred of them? The ones I've been hoarding for a special project to come along? Like this project? Huh?

Cam

Date: Thu, 30 Oct 1997 17:31:20 -0700 (MST)
From: Paul Harden <pharden@aoc.nrao.edu>
To: Cam Hartford <camqrp@cyberg8t.com>
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [29978] Re: 2222 Building Contest
Message-ID: <Pine.SOL.3.91.971030172612.20857F-100000@zia>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Thu, 30 Oct 1997, Cam Hartford wrote:

> Doug -
>
> So does this mean I can't use that box of 2N3904s I picked up at the swap
> meet about two years ago? Like about a hundred of them?

I am preparing the data sheets right now on the 2N2222 and some of the equivalents. The contest rules states to use 2N2222 or "exact NTE equivalent." I am making a list now of some of the more popular NPN's that are NTE123 equivalents, and will post to the group by tomorrow.

But in short, 2N3904's, 2N4401's, etc. ARE exact NTE123 equivalents.

7222, Paul NA5N

Date: Thu, 30 Oct 1997 16:38:42 -0800 (PST)
From: Jim W7LS <w7ls@brigadoon.com>
To: qrp-1@Lehigh.EDU, baswaplist@foothill.net, lowfer@qth.net, nwq-1@scn.org
Subject: [29979] How do I unsubscribe/subscribe?
Message-ID: <199710310038.QAA28664@k2.brigadoon.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

How do I unsubscribe and then resubscribe under a new e-mail address?

Thanks

Jim W7LS

Date: Thu, 30 Oct 1997 17:48:29 -0700 (MST)
From: Jack Meadows <jackmead@getnet.com>
To: ARDUJENSKI@aol.com
Cc: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Subject: [29979] Re: 2-WIRE YAGI??
Message-ID: <Pine.BSI.3.96.971030174211.18685A-1000000@gn2.getnet.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

10dB gain is like taking that 5 Watts and making it 50 watts!

I'm going to take a look at this antenna, for sure, but I think that the max gain to expect from 2 elements is only about 5 dBd.
Best regards,
Jack W7QQQ

On Thu, 30 Oct 1997 ARDUJENSKI@aol.com wrote:

> Has any of you used (or are using) a REVERSIBLE 2-WIRE YAGI for 40 M? I read
> with great interest about them in the W4RNL web site. It shows a theoretical
> gain of 10dB with a front/back gain of 14..
>
> For those not familiar with the antenna it is two 66 wire antennas spaced 21
> feet apart. The switch allows you to alternate the driven and reflector
> element.
>
> Lets see 10dB gain is about like taking that 5 watts and making it a 4-fold
> increase?? Oh what fun on FOX NITE!
>
> Alan KB7MBI
>
>
>
>

Date: Fri, 31 Oct 1997 01:21:17 +0000
From: Jim/N0UR <LAGESON@worldnet.att.net>
To: qrp-1@Lehigh.EDU
Subject: [29979] FOX: N0UR Fox log
Message-ID: <19971031012116.AAA17036@LOCALNAME>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Fox Log-NOUR 10/29/97

1	0200	K5ON	559	NM	GARY	770
2	0200	K5NZ	569	TX	MIKE	5W
3	0201	W0CH	559	MO	DAVE	618
4	0201	K0GJX	599	MN	CHUCK	5W
5	0203	N5LU	579	OK	BILL	5W
6	0204	KJ3V	579	AL	LYNN	1227
7	0205	W5TFB	559	TX	JACK	282
8	0209	N9DD	559	IL	JIM	32
9	0210	K2VCO	559	CA	VIC	725
10	0200	VE3JC	579	ON	JOHN	744
11	0212	WA6NAE/M	559	CA	DWIGHT	5W
12	0214	WB9HFK	559	IL	MARK	1159
13	0215	AA2PF	559	NY	DAVE	306
14	0217	KU4AF	579	NC	JOHN	876
15	0218	N6XU	579	CA	STAN	66
16	0218	N3CEU	599	MD	JOHN	712
17	0219	K8CV	559	MI	WALT	935
18	0220	AK1P	559	CA	PAUL	284
19	0222	KA8OKH	559	KY	RICH	933
20	0222	K1MG	449	CA	MIKE	614
21	0224	K5JHP	459	TX	BILL	825
22	0225	N4ROA	559	VA	DAN	970
23	0226	KI7MN	449	AZ	BOB	271
24	0227	KK6MC/5	339	NM	JIM	411
25	0229	AC6KW	559	CA	JEFF	16
26	0230	K10J	559	TX	OJ	732
27	0232	WB4EXW	559	NC	WALTON	5W
28	0233	W03B	559	CA	BOB	195
29	0233	WD8KQY	579	OH	GARY	446
30	0237	N1QQV	569	CT	KEN	400
31	0239	WE6W	549	CA	ED	1068
32	0240	N7VE	559	AZ	DAN	5W
33	0240	AA5UA	559	OK	CLIF	478
34	0242	K5ZTY	559	TX	BILL	33
35	0243	NQ7X	559	AZ	FLOYD	34
36	0245	W5FN	559	TX	TIM	586
37	0247	AB7ST	559	UT	BOB	129
38	0248	K06KA	559	CA	RON	176
39	0249	AE4GX	559	GA	SAM	1033
40	0250	VE5SP	569	ON	RON	463
41	0251	K5FO	579	TX	CHUCK	#1
42	0252	AB7TK	549	OR	RANDY	102
43	0254	VE3ELA	559	ON	KEN	1226
44	0255	N7MFB	559	WA	BILL	715
45	0256	WW7Y	559	UT	STEVE	94

46	0257	VE7CQK	559	BC	PAUL	20
47	0258	N3NLT	329	PA	RUSS	5W
48	0300	K2VNM	559	NY	BOB	735
49	0301	W0RW	559	CO	PAUL	2W
50	0303	W9KVF	559	IL	MIKE	1204
51	0306	W6EMT	579	WA	ROY	369
52	0307	N5JI	579	TX	DICK	1054
53	0308	W6BAB	579	CA	RAY	5W
54	0309	AB7TT	559	AZ	JOE	5W
55	0310	NI0A	339	MN	JOHN	5W
56	0313	K6YR	599	CA	ROB	5W
57	0314	AA0ZZ	579	MN	CRAID	1238
58	0315	W7QQQ	559	AZ	JACK	1210
59	0317	K4CGY	559	MD	JIM	5W
60	0319	K5UP	559	OK	GLEN	216
61	0320	KA5T	449	TX	LARRY	89
62	0323	N3YSI	559	PA	PAUL	5W
63	0327	NQ7X	559	AZ	FLOYD	343
64	0328	VE5RC	559	SK	BRUCE	986
65	0329	KV2X	578	NY	TOM	56
66	0336	W2PFS	559	NY	HAL	5W
67	0342	K6MR	559	CA	MIKE	5W
68	0346	W2UX	339	SC	GARY	593
69	0348	AB70A	229	AZ	KENT	57
70	0356	N0TFI	559	CO	JESS	1232

I sent same exchange to everyone 579 MN JIM #799, I hope all is correct, between QRN, QRM, QSB, KIDS, XYL, DOG and trying to read my log scratch there may be a few errors.

Thanks to all,
Jim//NOUR

Date: Thu, 30 Oct 1997 19:27:15 -0600
 From: Karl Heimbach <heimbach@concentric.net>
 To: qrp-l reflector <qrp-l@Lehigh.EDU>
 Subject: [29980] 30 meter OHR Sprint II for sale
 Message-ID: <345933F3.3CE3@concentric.net>
 MIME-Version: 1.0
 Content-Type: text/plain; charset=us-ascii
 Content-Transfer-Encoding: 7bit

Mint 30 meter version of OHR Sprint II for sale.
 \$85 shipped.

Thanks for reading... Karl - W5QJ

Date: Thu, 30 Oct 1997 19:17:32 -0500
From: n3fel@juno.com (Howard D Rubin)
To: af389@lafn.org
Cc: qrp-l@Lehigh.EDU
Subject: [29981] Re: 2N3055 Current Share Resistors
Message-ID: <19971030.191734.6558.0.n3fel@juno.com>

Dave,

You can force the transistors to share current if you transform their inherently negative V_{be} temperature coefficient to positive. You can do this with series resistors in the base leads (as more current is drawn in the base circuit the total $V_{be}+V_{res}$ drop increases). By putting series resistors in the emitters you introduce negative feedback to their current gain. This is also an effective way to force them to share current, but it reduces the efficiency of the series pass regulator. I have seen circuits that improve the current sharing by using emitter resistors that drive a base bypass transistor (yes, another application of a two-tee-two, two-tee-two, or its PNP sibling: a 2N2907). Can you put up the schematic on a website somewhere and let us take a look?

Regards,
Howard Rubin, N3FEL

By the way, does the 2222 contest include its complement, the 2907?

Date: Thu, 30 Oct 1997 20:36:28 -0500 (EST)
From: "L. B. Cebik" <cebik@utkux.utcc.utk.edu>
To: towertalk@contesting.com, antennas@qth.net, QRP-L List <qrp-l@Lehigh.EDU>, gqrp-l@blacksheep.org
Subject: [29982] cloudburners
Message-ID: <Pine.SOL.3.94.971030203246.4159A-1000000@utkux4.cas.utk.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Some notes on 75-meter "cloudburners" that I had placed at the site lost their link, so I took the occasion to add a bit to them. They are now back and linked from the main radio page. What I added was a simplified

loop at 35' with almost the same performance as the 2-element up-pointing quad--a big saving in supports and labor for about a quarter dB less gain.

Hope the notes are useful to someone.

-73-

LB, W4RNL

L. B. Cebik, W4RNL /\ /\ * / / / (Off) (423) 974-7215
1434 High Mesa Drive / \/ \/ ----/\---- (Hm) (423) 938-6335
Knoxville, Tennessee /\ \ \ / / || / (FAX) (423) 974-3509
37938-4443 USA / \ \ \ || cebik@utk.edu
 URL: <http://funnelweb.utcc.utk.edu/~cebik/radio.html>

Date: Thu, 30 Oct 1997 16:52:18 -0700
From: gsurrency@juno.com (Gary L L Surrency)
To: adams@chuck.dallas.sgi.com
Cc: qrp-1@Lehigh.EDU
Subject: [29982] Re: Norcal paddle notes - Some thoughts.....
Message-ID: <19971030.165218.3438.0.gsurrency@juno.com>

Chuck and the gang,

Here are some additional Murphy's Laws when it comes to painting.
Learn these rules before beginning that next project.

AB7MY's addendums to Murphy's Laws:

1. If the wind isn't blowing when you start painting, it soon will be.
2. Even if the relative humidity is 10%, it *will* rain, or your neighbor's irrigation will come on and splash your freshly painted project.
3. Drawn by either the odor or color of your paint, all nearby insects are immediately notified there is something they have to investigate.
4. No matter how carefully you prepared the surface, upon painting you will find numerous surface imperfections once you apply the first coat.
5. You can strain the paint several times, but you will always get a paint blob out of your equipment at the exact instant you spray the final pass.
6. Same as above, but this law refers to an aerosol can. Replace "strain"

with "shake".

7. Never use newspaper as a backdrop. The wind will always blow up a corner of it to be firmly embedded in the wet paint. Right after you've gone inside to clean up. It will be well dry when you finally discover it.
8. After painting one or more sides of the project, you will find you don't have enough paint left to finish.
9. The next can of paint you buy to resolve the previous law above, won't match in color and you'll have to do it all over again.
10. Different brands of paint always lift or wrinkle other brands of paint.
11. There are always some missed finger oils lurking somewhere on your unpainted project, waiting to be appear once the paint is applied.
12. Someone (probably you) will touch the finished piece just before it had a chance to dry.
13. A beautifully finished project begs to be scratched or skinned, usually just after you finish admiring it so you'll be more upset than if it had some age on it first. As a result, you'll probably get real p_ssed off and have to do it all over again.
14. Old paint never dries.
15. Old spray cans never unclog. They may spray, but they'll "spit" too.
16. The local laws prohibit sale of aerosol paint in cans. Graffiti is the cause of this.
17. You can never find the exact color you want in an aerosol container.
18. Paint brushes were invented by a masochist.
19. Paint never comes completely out of the clothes you forgot to change before you started painting.
- 20 Your wife will *always* be the one to tell you Law # 19. You somehow missed it. She didn't. "Oh honey, I *just* bought that shirt for you last week! Now you've ruined it!"
21. You'll never get all the paint off of your hands - the remainder just has to wear off. Some paint will alway remain under your fingernails, no matter hard hard you clean them. Paint has a special ability to do this, and no one has ever figured it out. If you do, you'll be a millionaire.
22. Some paints cannot be thinned. Watch out for these insidious tormentors.
23. Some paints cannot be removed. Not by anything short of sandblasting.
24. Some paints will always "run", no matter how careful you are. They belong to the same family as # 22, above.
25. No two paints applied at different times will match, no matter how similar they are.
26. No two paints fade at the same rate upon exposure to sunlight, time, etc.
27. Paint has an incredible tendency to somehow land on your new automobile, even though you took care to park it in the backyard or even in the closed garage while you painted outside.
28. Compressed air *always* has water or oil in it.
29. Your paint gun was put away un-cleaned. And you're sure it wasn't

you.

30. You never have enough air hose to reach the spot you need to finish.
31. All paint guns *and* aerosol cans will soemtimes squirt the wrong way, and when they do, you'll just happen to be looking at it. ;-o
32. Whatever shoes you are wearing will soon be ready for the trash can.
33. When you are all cleaned up, your wife will say: "What's that awful smell?!" You, of course, smell nothing. Your nose is full of paint.
34. Same as above, except at the most passionate time when you are in bed with your wife, she will find paint in your hair and the romance will be lost. :-(
35. When you have everything ready to go, and you are painting happily - the phone will ring.
36. It is impossible to paint without getting paint on your glasses (or contact lenses).
37. Paint spills, no matter how careful you are. And you won't be able to gert it all cleaned up. Your workshop is a testimony to that fact.
38. Fast drying paint dries too slow.
39. Slow drying paint dries too fast.
40. There is no way to support a workpiece for painting, without it somehow falling into the dirt (usually right after you've finished painting it), or obscuring an important area you *really* need to get painted.

And on and on and on.....:-(

The above laws have been compiled by your's truly after many years of painting various items, including autos, farm equipment, radio projects, models, etc., etc.

Read these laws and try to avoid as many as you can. There will always be some that "get" you. Feel free to add your own to the list. How 'bout it, Chuck? ;-)

Good luck and 72,

AB7MY

Gary Surrency

Chandler, AZ (Near Phoenix), QRP-L #571, AZ ScQRPions, ARRL VE

Date: Thu, 30 Oct 1997 18:02:03 -0800 (PST)
From: "Robert P. Okas" <vintage@best.com>
To: Roger Hightower <n7kt@dancris.com>
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [29982] Re: Norcal paddle notes

Message-ID: <Pine.SGI.3.95.971030174841.5938B-1000000@shellx.best.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi Roger and the Group,

Yup, that hot rolled stuff is anything but dead flat. One side, the good one, had a high spot in the center. The other had high spots at the edges. In finishing the base, I chose the manual route and got some sheets of sandpaper. Lay the paper on a hard, flat surface, hold it with one hand and swoosh the base around with the other. It takes a little time, but you have better control over the process and the results are impressive.

I had started out with 80-grit on the "good side." This took some time, but I was into the Zen of the process. The bottom, "bad side" was rougher and I wound up using 40-grit. Both sides were finished up with a sanding with 100-grit paper. I prefer the non-loading No-Alox for this step.

I'd like to publicly thank Doug, Jim and all the others that made this kit possible. I'm adding metal finishing and polishing skills to my resume as a result!

72/3,
Bob - W3CD

On Thu, 30 Oct 1997, Roger Hightower wrote:

> I believe the base is "hot rolled". Mine was not flat, and required
> quite a bit of work to true it up.
>

Date: Fri, 31 Oct 1997 02:14:11 -5
From: "Bill Kelsey - N8ET - Kanga US" <kanga@bright.net>
To: qrp-l@Lehigh.EDU
Subject: [29983] 2222 contest and G-QRP Circuit Handbook
Message-ID: <199710310217.VAA27881@sparticus.bright.net>
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT

Someone on the list today mentioned that the G-QRP Circuit handbook is a good place to get design information. I have the US stock....

In the interest of helping the "test" along, I will offer the Circuit

Handbook at it's normal cost of \$12, and I will cover the shipping cost. Just mention the 2222 contest when ordering.

I can take orders via e-mail or US mail:

Kanga US
Bill Kelsey - N8ET
3521 Spring Lake Dr.
Findlay, OH 45840

73 - Bill - N8ET
Kanga US
kanga@mail.bright.net
<http://www.bright.net/~kanga/>
419-423-4604

Date: Thu, 30 Oct 1997 20:32:09
From: Bill Myers <bjmyers@arc.net>
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [29984] FOX: Finally got a N/T+
Message-ID: <3.0.1.16.19971030203209.0cafb1b6@mail.arc.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Thanks for hanging in there John, conditions were rough. But we made it.

Been a long time since I got a 219 RST, but that's better than none at all...

BTW, your fist sounds real good, and you MUST have a set of ears to pull me out, so it looks like we've got another fine quality CW operator...

72

Bill KK4KF

Date: Thu, 30 Oct 1997 20:47:55
From: Bill Myers <bjmyers@arc.net>
To: "Low Power Amateur Radio Discussions" <qrp-1@Lehigh.EDU>
Subject: [29984] My static problem...
Message-ID: <3.0.1.16.19971030204755.0cafc1a4@mail.arc.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

First off, thanks to all who have responded. I'm pretty sure I have responded to all privately, but I want to make sure to thank everyone. This is a great list.

Unfortunately, the static is there, and I believe it isn't man made (unless the Air Force has something over on the base wiping out all the HF bands). I've been checking the area with my 49er and it seems to be everywhere. Even turned off the power to my house and the neighbors to make sure it wasn't one of us doing it (I live in a duplex/townhouse). No street lamps bad that I can find. Noise level appears to be the same for blocks and blocks.

While trying to catch John tonight, I played around with my toys to see if I could improve the situation.

I initially tried to tune John in on my MFJ 9040 using the SCAF. Got him narrowed down, but still lots of static, and not a lot of audio in the headset.

Switched over to the Icom 735. Used the NB (no effect), and tried some passband and notch adjusting. Not much better. Kicked in the Heathkit Active Audio Filter and Rad Shack DSP and it helped some, but there was still a lot of noise in there.

I finally went back to the MFJ and SCAF, ran the audio out of the SCAF into the Heathkit, then into the R/S DSP. By the time I got done tweaking, turning, and pushing buttons, his signal came up to a respectable level (at least I had a solid copy ABOVE the noise level) with some QSB, but manageable.

I know, if I buy a good DSP unit I won't have to go through all this. Well, who knows what'll be under the tree for Christmas.

I expected there to be a fair amount of ringing, as sharp as I was tuning everything, but there wasn't. And I didn't hear anyone (or anything else except a little static) once I got it all tweaked.

Guess I'll have to try that with the Foxes next week and see if I can improve my pelt rate.

72

Bill KK4KF

Date: Thu, 30 Oct 1997 23:02:06
From: "Gary M. - W2UX" <mail4gary@worldnet.att.net>
To: qrp-l@Lehigh.EDU
Subject: [29985] Computer generated noise help wanted.
Message-ID: <3.0.3.16.19971030230206.3797a628@postoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hello gang and thanks for all replies.

Just put together a Pentium 133 box and boy what a noise generator. Did not have this problem with past 286, 386, or 486. It makes so much hash that 40 meters is unsuable. Any suggestions.

```
=====
72/73 de W2UX           QRP-ARCI
Gary McCaughey         QRP-L
Lexington, SC          CQC
CW is the REAL THING!
Use it....or lose it.
=====
```

Date: Thu, 30 Oct 1997 20:30:38 -0600
From: n5inz@juno.com (John M Andrews)
To: af389@lafn.org
Cc: qrp-l@Lehigh.EDU
Subject: [29986] Re: 2N3055 Current Share Resistors
Message-ID: <19971030.203040.3222.11.N5INZ@juno.com>

On Thu, 30 Oct 1997 09:03:17 -0800 David Shalita <af389@lafn.org> writes:

>Hi,
>I have a sick 13.8 v regulated No_Name 8 amp power supply that runs
>every thing in my QRP shop. PS ckt is roughly a 723 regulator IC,
>TIP41A predriver into two 2N3055 pass transistors.
>TIP41A is powered from a DC voltage more positive than collector
>voltage for 3055 pass transistors.
>
>-SNIP
>
>Thanks for any suggestions.
>73, W6MIK
>

>--

>

> -----
> Dave Shalita,
> af389@lafn.org
> Van Nuys, CA

>

>

>

Hi Dave:

I've had the same problems. The basic design, in my opinion, is flawed
AND the '3055 tries to do 2 much.

One Fast "n Nasty method is to change out the pass transistors. Try
2N3773's. Dan's Small Parts has\HAD them for less
then 2 bucks each a few weeks ago.

72, John-N5INZ

Date: Thu, 30 Oct 1997 22:24:54 -0500
From: Michael <MichaelN@cycat.com>
To: qrp-l mailing list <qrp-l@Lehigh.EDU>
Subject: [29986] First FOX!!! YaHooo
Message-ID: <34594F86.7451@cycat.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Thanks John, you did a great job.

It is true, you must be able to hear them to work them.
John was the first fox that I was able to copy well enough
to get a complete exchange.

He would fade in and out and I ended up waiting a loooong time
to finally hook up. Got so excited I had a tough time sending
my call. :-))

I am using a HW-8 here so I have a serious receiver disadvantage.

I was rarely able to hear any of the hunters.

Great fun!

michael N6CHV

Date: Thu, 30 Oct 1997 22:25:16 -0500
From: mikemo@ibm.net
To: qrp <qrp-1@Lehigh.EDU>
Subject: [29987] N/T+ fox, gotem!
Message-ID: <34594F9C.A47@ibm.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Nice work tonight John. The band was noisy (always is). Thanks for hanging in and picking me up. I got a sig report of 339, sent 229. Good ears John.

72 de kf4trd
Mike Maiorana

Date: Thu, 30 Oct 1997 18:56:34 -0700
From: gsurrency@juno.com (Gary L L Surrency)
To: qrp-1@Lehigh.EDU
Subject: [29988] 2N2222 Project ideas - sidetone osc
Message-ID: <19971030.185635.10230.0.gsurrency@juno.com>

Gang,

Unless you just have a penchant for deriving the sidetone from the received signal by partially muting some rcvr stages, I think the twin-T audio oscillator for the sidetone is hard to beat. It is very simple, uses a single transistor, and produces a pure sine wave audio tone. Both volume and frequency are easily adjustable.

You can find the circuit in late copies of the ARRL Handbook, or just look at the schematic of the OHR100 for an excellent example.

Just a suggestion, IMHO.

72,

AB7MY
Gary Surrency
Chandler, AZ (Near Phoenix), QRP-L #571, AZ ScQRPions, ARRL VE

Date: Thu, 30 Oct 1997 22:25:50 -0500
From: mikemo@ibm.net
To: qrp <qrp-1@Lehigh.EDU>
Subject: [29989] dummy on dummy loads
Message-ID: <34594FBE.5AB8@ibm.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Being the cheap skate that I am, I tried to construct my own dummy load tonight. DC resistance is 52 ohms at 120 watts continuous. Only problem is that it shows a HIGH SWR. SWR is lower on the lower bands. Sooooo, there must be a reactive component to the resistors. I thought they were ceramic resistors, not wire wound. Do all wire wound resistors have a hole in the middle? These are rectangular.

It is made of 12 resistors, 39 ohm 10 watt each. I have 4 groups of three in parallel (13 ohms each), with those in series (52 ohms). How critical is lead length and layout? I have them laid out on the bench, kind of in a circle. Is that the problem?

Any help is apprecaited.
72 de kf4trd
Mike Maiorana

Date: Fri, 31 Oct 1997 11:55:03 +0800
From: "W. Daniel, 9V1ZV" <daniel@pandora.lugs.org.sg>
To: mail4gary@worldnet.att.net
Cc: qrp@pandora.lugs.org.sg
Subject: [29988] Re: Computer generated noise help wanted.
Message-ID: <34595699.pandora@pandora.lugs.org.sg>

On Thu, 30 Oct 1997 23:02:06, "Gary M. - W2UX" <mail4gary@worldnet.att.net> wrote:
> Hello gang and thanks for all replies.
>
> Just put together a Pentium 133 box and boy what a noise generator. Did
> not have this problem with past 286, 386, or 486. It makes so much hash
> that 40 meters is unsuable. Any suggestions.

Date: 30 January 1994
Author: Daniel 9V1ZV daniel%pandora@csah.com
Rel: 1.4

Dealing with Computer generated RFI/EMI

1.0 Introduction

One of the most frustrating problems about using computers with radios, whether it be for controlling purposes or for decoding, is the amount of RFI generated by these machines. Most of the time, the RFI generated is enough to render certain bands useless and on other bands, it may drown out any weak signals and distort or interfere with signals that you want. This is totally unacceptable for working with digital modes and even for CW. Thus one of the most frequently asked question is how this RFI may be reduced or eliminated. The bad news is that, there is no way that I know of to completely remove the computer generated RFI in most situations. The good news is that there are definite steps that we can take to reduce the RFI to a very acceptable level and in some cases, it will almost disappear altogether. This document is a compilation of suggestions from various persons and some of the things I have tried with my own system when dealing with this problem. Many of the documents I have seen relate to situations involving transmitters and how not to generate them (RFI). This document is written from a receiving point of view.

I suppose most people would have already tried the basic steps to improve signal conditions by having the receiver and antenna as far removed, physically and electrically from the RFI source (computers and monitors in our case) but I am also aware that sometimes there are limitations and constraints as to how much distance can be had. One may have also tried changing the orientation of the computer, monitor, receiver and antennas and feeds to see if things get better. Having done all that, what else can be done? This is the predicament I had and thus this document.

The standard disclaimer applies and I will not be responsible for any accidents although I have tried my best to present the following information in the best integrity.

2.0 RFI Sources

Before we actually begin tackling the problem, it might be helpful to know something about why computer generates RFI and how these get into the receiver. The two main components of the computer is the main CPU and the monitor (for simplicity sake). The computer runs at a certain clock rate as determined by an internal oscillator. Most of the time the rates are something like 4.77 MHz, 8 MHz, 12 MHz, 16 MHz, 20 MHz, 25 MHz, 33 MHz, 40 MHz, 50 MHz, 66 MHz and 80 MHz. This is not the only clock involved, there is also another oscillator on the video generator card and sometimes a few

oscillators, plus those on other cards. As you can see, these clocks are all oscillating in the HF and L-VHF regions which may interfere with signals we would like to receive. To make things worse, these clocks are usually sub-divided into a number of other frequencies within the computer. Since the computer is a digital system, the characteristic waveform of these signals are square-wave and square-waves tends to result in a lot of harmonics. The video card also generates RFI because the data-pixel-rate is often high enough to fall into the HF regions. All these reasons are why computers and monitors are tops when it comes to generating RFI. This is often made worse by computers with cheap plastic casings which do not shield the system. Many people have the opinion that monitors are one of the main RFI sources and this may well be the case. I have also noticed that the PC keyboard also generates a considerable amount of RFI despite its innocent look. This is because it contains a microprocessor on board which runs off a clock in the 3 MHz range. This problem is compounded by the way the keyboard PCB runs which makes like a pretty good loop antenna type radiator and so the harmonics can be heard in the 2nd and 3rd harmonic range. The monitor probably has an on-board crystal at about 14.316 MHz so you will find a strong carrier there too.

The first thing we want to do is to determine how much RFI is being generated by the CPU and the monitor. It may be that the CPU is not radiating at all but the monitor is the culprit, or vice versa. This can be done by switching off the monitor and leaving the CPU on just to see how much RFI is getting into the radio. The following is a suggested procedure:-

- 1) Do a quick sweep across the bands to find out where the RFI is the strongest. This is helpful because if we can reduce the RFI here, there should normally be a corresponding decrease of RFI everywhere else but not necessarily so.
- 2) Disconnect the mouse, serial cables and printer cables, keyboard, video cable, video power. If you can, run the receiver on batteries for this part. Now turn on the computer and see if the RFI is increased by any appreciable amount.
- 3) Now, connect the keyboard (with the CPU on), then the mouse, then the serial cable, the parallel cable, the video cable, monitor power cable (don't turn on yet). As you reconnect these, note the increase of RFI if any. You should now have some idea as to which is the main contributor of RFI. If you should have the good fortune that none of these result in any appreciable increase of RFI then you're in luck.
- 4) Turn on the monitor and note the increase in RFI. Run both text and graphics modes to see if the RFI is affected.
- 5) Reconnect the radio to the power supply and again note the RFI increase if any.

- 6) Disconnect the radio from any antenna, both external and internal, and note if the RFI goes away. Note that on some radios, when you unplug the external antenna connection, the internal antenna is automatically activated. To prevent this, plug in a dummy plug to the antenna socket.

By now you should have a pretty good idea of which components are contributing to RFI. Keep these notes, while we move on to another point, RFI paths.

Earl Morse KZ8E suggest this for pin-pointing RFI source:-

In the event that this does not work you will need to investigate for cabinet radiation from the monitor and computer. Make a loop from some RG58 coax by stripping back the shield a few inches and making a couple of turns about an 1-2 inches in diameter. Solder the center lead to where you stripped back the shield. Plug this loop into your receiver and use it to probe the computer setup. A faulty computer cabinet can be easily closed up with fingerstock, braid, or other conductive materials. Shielding a monitor cabinet is a lot more difficult and could cause safety problems (high voltage) or overheating.

If you find the above method too troublesome, just get hold of a battery operated portable AM/SW receiver with an internal ferrite rod antenna and start moving around, rotating the radio as you go. Often you can pinpoint the major RFI sources just by following the radio to the place where the strongest hum is found. Of course, the radio should be tuned to a section of the spectrum where the RFI can already be heard somewhat. Do this with the radio near the suspected equipment and fine-adjust from there. This will also give you an idea of what kind of RFI and on what frequency it is focused on.

3.0 RFI paths

RFI gets into the receiver from the source through a number of paths. This can be through the power supply, through the "earth" point of the power supply, through direct radio emission, even through "shielding" which are not properly designed or used. There are a number of ways to deal with these situations. If in (6) above, your radio is still picking up RFI with no antenna connected then, the shielding in your receiver is poor. If in (5) above, the RFI increases as you reconnect the radio to the mains power supply or adaptor, then RFI is coming in through the power supply. If your radio is connected directly or indirectly to the computer through the serial port or some other interface, that too could be a path for RFI. You will know if this is a problem as you go through step (3) above. If the RFI

increases appreciably as you reconnect the external antenna, then the RFI may be coming from direct emission or is being picked up from the antenna feed.

Remember that in many cases, RFI is coming in from more than one path so it is important to check out all possibilities. On the other hand if one path is the overwhelming problem, you may want to deal only with that. Other basic measures are to keep cables and connections as short as possible. This will prevent these connections from becoming radiating elements for the RFI from the equipment. If possible, have your radio equipment connect to a different power circuit but watch the earth so that no dangerous voltage-potentials are formed.

4.0 Killing RFI

As you can probably see, RFI is a combination of problems and not one problem. It can be classified into 3 categories:-

- a) Shielding problems
- b) Filtering problems
- c) Design problems

These are not definitive categories but are used for simplicity. In many cases, poor shielding is a prime suspect. So we will deal with this first. Now to get on with the real action.

4.1 Shielding problems

When we talk about shielding, there are 4 things to consider, the radio itself, the monitor, the CPU and the antenna/feed combination. Poor shielding can be an inherent problem to some designs but can also be due to dirty connectors and old parts. Go through the equipment to make sure that all the connection points are secure, this is especially in connection to the antenna shielding, radio power supply, CPU casing, cabling. Make sure that the wires are not old and all the connections are clean, no oxides on surfaces. The presence of oxides makes for poor conduction and in some cases it results in rectification of signals which can then lead to a host of other problems.

If the problem is a design one, such as poor shielding in a radio as determined by step (6) in section 2.0 on RFI sources, or poor monitor or CPU shielding, then we need to provide an adequate shield. This can normally be done using tin/aluminium foils or conductive spray. The basic idea is that we must line the casing of the equipment to be shielded with a barrier to RFI. This must be done carefully because since the shielding is conductive, it is possible to accidentally short circuit something and fry your radio or

whatever it is you are trying to shield. The spray is probably the easiest to use but also quite expensive. My feeling is that metal foil probably provides better shielding but is harder to apply. The conductive spray or paint has a lower conductivity but spreads more evenly and gets into difficult to reach locations more readily. What you need to do is to carefully remove the plastic casing of the radio or monitor, paying attention to cabling and electrical contacts. Remember that opening the case will almost certainly invalidate the warranty on the equipment. Clean the insides of the case thoroughly and make sure that it is dry and free of dust or grease before applying the spray. You may need to apply several coatings to get better shielding. Make sure that at some point in the casing, the applied shielding comes into contact with ground. Remember that in monitors, chassis is not always connected to ground so check this out first. For the shielding to be effective, you need to provide as complete a "wrap" as possible but remember not to spray onto switches or anything that might cause a short circuit. Also prevent blocking up ventilation holes. You may at this point wonder about the screen itself. Well in most color monitors, the mask inside the monitor acts as a shield of sorts. Wait for the coat of paint or spray to dry before replacing the cover. Try to ensure good grounding for the shield and avoid scratching off the paint. If arcing should occur, use some insulating tape over the area. The kind of spray that I use is known as EMI-LAC or EMV-LACK (by Cramolin) and is of German origin. There are many other makes and most should work okay. In the event that you cannot find either paint, spray or suitable foil, conductive tape will do also. Remember, the conductive screening must NOT touch the components. Pay attention as there is always shock hazard when messing with monitors. Don't do this yourself unless you know exactly what you are doing. :) Stay alive.

Gary Coffman KE4ZV has this advice about shielding:-

If the monitor is the culprit, there are conductive sprays you can use on the inside of the plastic cabinet to reduce the hash. GC Electronics makes one that works well. You have to strip the monitor and spray the cabinet. Usually you want to spray inside for appearance sake. When you put it back together, watch out that the HV section has adequate clearance with the now conductive case. If it doesn't, glue some fish paper in the proper spots to prevent arc overs. Unless the monitor is a "hot chassis" design, bond the conductive coating to the chassis, and bring a bond wire out from the chassis to station ground. If the monitor is color, the shadow mask in the tube will form an adequate shield, but if it's mono, then you may need to put fine copper screening over the face of the tube. Spray paint it flat black and it'll double as an anti-reflection screen.

If the cable is radiating, first make sure you're using a shielded cable, then use some snap on ferrite chokes on the cable. These chokes are good things to put on *every* external cable.

If the PC is the culprit, scrape paint so that the case halves can bond properly, and add extra screws so that every seam has a screw at least every two inches of it's length. That's what it takes to get a good Faraday cage. Any openings in the case should be covered with copper screen wire. The floppy drive opening is a problem because you need access. The best way to handle this is to shield the entire drive bay from the inside and accept the hash when the drive is in use. Bring a bond wire from the case to station ground.

Of course it always helps to have the radio's antenna as far from the PC as possible, and brought back to the radio via a well shielded coax. The radio chassis should be bonded to the station ground. If you're using a HT (so sorry) then you may have to locate the radio and TNC far from the PC via a long RS232 cable. Note that the TNC can also be a source of noise. In some cases it's better to leave the TNC next to the computer and remote locate the radio with long audio and control cabling. The TNC should be treated the same way as the PC. Sand off the paint and add bonding screws. If it's plastic cased, either use the conductive spray, or put it in a metal box.

If you are using the spray, make sure to apply an even layer and you may want to repeat the process a few times to get a better screen. Do not waste excessive spray on one spot but make sure that the coat does not have "thin" spots. The same method can be applied to the CPU casing or to the keyboard casing. The effectiveness of such a method on the keyboard is debatable however, seeing that it is difficult to build a proper Faraday's cage around the offending circuitry. Care must also be taken seeing the tight enclosure of most keyboards.

Shielding of cables are also important. Try to make sure that the video cable has a good shielding/screening. The same applies to serial and parallel cables and, of course, the antenna feed should be well shielded. For antenna feeds, avoid TV 75 ohm coaxes as these normally do not provide sufficient screening. Try RG-58-C/U (which I think has better screening than RG-58-A/U) or some other high-screening type cables like RG-8 and the like. Well screened antenna feeds go a long way to remove RFI. I have been told that the equipment should all be connected to a firm ground via heavy gauge wire or braid. This is probably true and if you can, why not. Where cables terminate, use good and appropriate connectors such as PL-259 or something similar. In all cases, provide the screening with a good ground. A well screened antenna feed may eliminate up to 80% of the RFI in some case, or more. If you are listening on VHF and UHF however, the length of the feed may need to be weighed against signal losses in the feed itself. Feeds such as the 9913 have lower losses but are quite expensive. Use them if you can however. Personally I still find the RG-58 to be the easiest to work with.

Sometimes, in some CPU units, there may be some parts which are difficult to shield, such as the disk-drive. This is not too serious since the drive is not operative most of the time, but if you elect to try to screen that also, remember that the screen must all be well connected electrically. The same goes for the rest of the computer casing. If you can, use one with a proper metal casing on all sides. What we want is a Faraday Cage so see that the whole case is well grounded. Scrape off some paint at the screws so that there can be good electrical contact everywhere.

Other exposed connectors and splitters (which are not recommendable) can also be letting in RFI so you may want to check out their screening as well.

4.2 Filtering problems

This represents the next major path for RFI. In some poor designs, RFI is not properly filtered out of the computer or monitor power supply and it thus leaks out into the mains, and from there into the radio power supply and finally into the RF section (or AF sometimes) of the receiver. This type of problems can normally be improved by using a line filter for the equipment's power supply. Make sure that the line filter is rated for the power the cable is meant to carry or it may burn up. There is a kind of line filter which is essentially built as a socket which you need to replace the one on the power supply with. I am not sure how much improvement this kind of filter affords but if you elect to do this, do it with care! Other than using line filters, you can also use ferrite beads and toroids on most any lines. Experiment around with a bunch of these things. You could also put a bunch of ferrite beads on the antenna feed line and this will act as a kind of balun as well as preventing RFI from travelling on the screening. There are many types of ferrite RF chokes, clip on types and ready made types, which can be used. The ARRL Handbook has a description of some of these devices. I have built myself a 4:1 balun (BAL-anced to UN-balanced) for my coax fed dipole and now I get very much less computer RFI and other noise from my antenna system due to the impedance matching and improved power transfer characteristics. Better selectivity is also a benefit of a good antenna system. Line filters and RFCs can do wonders so experiment with them at various strategic locations such as power supplies, some audio lines etc.

Other than that, RFI often comes through other data lines and control lines in parallel and serial ports as well as video ports. Besides using ferrite beads on these, you may want to connect small value capacitors between the lines to ground. For parallel and serial lines, use 0.01 μF capacitors (multilayer, MKT if possible, others may work well too), and for video ports, connect 100 pF capacitors from the RGB, H-Sync and V-Sync to ground. These may have some other effects on the lines so experiment with slightly higher or lower capacitor values.

If you are receiving on certain bands only, a bandpass, highpass or lowpass filter may help if used on the receiver front-end. This, however, will not be effective for reducing in-band noise. A notch filter can be used on the antenna feed to notch out certain strong emissions such as the 14.316 MHz crystal oscillator on the video card or on the baud-rate generator. Note that all kinds of filters (barring active ones) incur losses to some degree and if your signal lands too near the unwanted emission then you cannot use the Notch since the wanted signal may also get filtered out. A high-Q notch is often preferred in this regards.

Concerning the use of clip-on filters (such as those sold by RS), Steve Byan has this to say:-

The "clip-on choke" is a split ferrite bead in a plastic case, sold for RFI suppression from personal computers. The two halves of the bead fit around the cable; the plastic case has a hinge and a latch to hold the two halves together. You could get the same effect by slipping a ferrite bead onto the coax before attaching the connector.

This idea is similar to the ferrite bead baluns used in amateur radio. The idea is to increase the impedance to RF current flow on the outside of the coax shield - this ideally prevents the coax from becoming part of the antenna.

I'm skeptical that one or a only a few of these Radio Shack beads would have much effect when placed on the coax lead-in. I think it would take quite a few beads to get enough inductance to help.

It might be better to use the beads on the offending appliances.

I'd recommend John Doty's method of grounding the coax shield at the antenna, and running the coax buried or along the surface of the ground. I think this will minimize pickup of local noise sources more effectively than a few ferrite beads at the receiver.

Power line decoupling and filtering is essential for optimum performance. The standard power supply of most PC's is a switching power-supply. Such systems, while power efficient, tend to generate spikes and unwanted harmonics due to the switching effect. Needless to say, if not handled properly, these spikes will get into the mains and from there into your radio. This is usually not severe because the design usually takes this into consideration already. What is more worrying is the CPU clock leaking into the mains through the power supply. Once again, the line filter is the way out.

Often, when only the audio from the receiver is required to go into

the computer, you might want to consider some way of isolating the signal from direction connection to the computer. One simple way is by the use of 1:1 audio transformers. Personally I have found a slight improvement here but not to my satisfaction. I also tried connecting the audio from the receiver to aa adapted FM microphone and having another FM radio pick up the audio which goes into the computer. This seems a lot of hassle but may be a last resort or for people who really want distance between the radio and the computer. Other forms of isolation can be implemented using IR or optics. These will provide excellent isolation as far as the audio line is concerned and no RFI worries from that path.

4.3 Design problems

RFI problems are sometimes compounded by poor antenna or receiver design. Antenna impedance mismatch, for example, can make things worse that it needs to be. As such, use of baluns and transmatches may help. Although the coax antenna feed is supposed to keep out RFI, a mismatched antenna and feed may result in the coax screening itself picking up RFI. So if you are using coax feed into a balanced dipole, try using a balun at the feed point. Balun designs are really simple to build and can be found in the ARRL handbook also. The impedance matching of the antenna to the feed can also be handled by the balun. Baluns, being what they are, normally incur some signal loss but in a good balun, this is insignificant compared to losses in the feed itself. Besides, loss of signal strength is often made up for by improved S/N ratio. I have not confirmed this but some out of band RFI can be reduced by the use of antenna tuners which provide better selectivity. Such tuners can easily be made from any number of designs found in amateur circles because commercial ones tend to be rather expensive and come with S.W.R. meters and other fancy things that the RX-only SWL does not need. In my case, a coax feeding into an off-center-fed-dipole, the balun did wonders to the S/N ratio and I actually say a signal strength improvement. This does not mean that the balun improves gain but the selectivity it provides may prevent the receiver AGC from kicking in and drowning out the weaker station thus resulting in a higher apparent signal strength.

Kok Chen AA6TY has this to say about unmatched antenna systems:-

And, finally, finally, just as connecting a coax to a balanced antenna will cause feedline to radiate, the reciprocal also happens. If you feed a balanced receiving antenna with an unbalanced line like coax, the outside of your coax will pick up noise and send it to the antenna input of the receiver. Place a balun between the coax and the antenna itself.

Excessive gain, such as may be the case with antenna pre-amplifiers

will not always improve the S/N because then the noise gets amplified along with the signal. In this respect, normally a masthead pre-amp will perform better.

Decoupling in some digital equipment is not properly done and can lead to RFI being insufficiently suppressed. This can be remedied by placing 0.1 uF capacitors along all points in the power supply of the equipment between supply and ground. This may sound silly to some because it may seem easier to use one big capacitor, but while the electrical property at DC may be similar, the distributed capacitance has a different effect on RF. You want to ensure that your power supplies are properly decoupled and no unwanted oscillations are taking place in the regulators.

The directivity properties of the antenna can also help improve signal conditions under RFI. The loop antenna, for example, can be positioned so that it nulls out at the RFI source. I haven't tried this myself but in theory it should work but I cannot comment on the actual performance you can get out of this. Similarly the dipole also exhibits certain directive properties which can be taken advantage of to reduce RFI.

The use of antenna tuners and pre-selectors may help reduce out of band noise and may provide a clearer signal especially if a high-Q tuner is used in the front-end. If an active antenna is used, it is probably more advisable to have that antenna mounted at the mast/feed-point. This is so that only the signal gets amplified and not the RFI from the computer. This is especially so when we are talking about broadband RF pre-amps which are more susceptible to noise. I now have an MFJ-1020-A active antenna pre-amp which also contains pre-selector section and it works well for me, removing a considerable amount of out-of-band signals but at the same time, the noise floor is also amplified. Judicious use of such a system can help improve reception on many signals, especially of the continuous carrier types like RTTY and FAX or SSTV.

If you are constructing your own interface equipment, try as best as possible to build it into somekind of shielded casing, or a metal box. This may help reduce some RFI input to the radio.

5.0 Other measures

Besides the above, if one is using the computer for receiving CW/RTTY or other digital signals, a good IF or AF filter will help in removing unwanted noise. The advantages of the different filter types are detailed in the ARRL Handbook. For those who are more well off, a DSP adaptive filter can be of added convenience, aside from all the other SC (Switched Capacitor) filters, Notch filters. Again, I do not have the privilege to speak from experience. Bandpass filters are quite easy to construct and you may want to experiment with certain designs before

investing in the real thing.

For those who are thinking of a new computer, I hear that notebooks have very low RFI emission and may be very suitable for radio use.

In case you are like me and don't live near the ground floor, you may want to use a balanced antenna system which does not require a ground or you may want to get one of MFJ's Artificial Ground. Here is an excerpt from Scott N3FI to me about this:-

I picked up this thing called the MFJ Artificial Ground, which consists of (I think parallel) an LC circuit and a counterpoise wire. This allows you to "tune" the reactance out of the counterpoise wire so that it "seems" like an earth ground to the shack. No more zaps on your microphone! Don't know if necessary on RCV only, though. Wouldn't imagine so. Just remember that electrical outlet ground is ground at 60 Hz, but NOT in the MHz. Your whole wiring system will act as an antenna!

As far as the wiring of the feed goes, remember to keep the feed from running parallel with mains wiring and try to avoid fluorescent lamps if possible. Some of these old lamps have faulty chokes which tend to generate some noise. Most modern buildings should be okay but older places tend to have this problem. While on the subject of wiring, remember that it may not always be your computer/monitor which is generating the RFI. Especially now that more and more people are staying in apartments or terrace houses, your neighbour's computer system may also be a source of noise. One way to go about this is to have a nice talk with your neighbour or use some kind of grounded metal sheet or grid at the walls. In concrete buildings, there are steel bars in the walls and so this may not be absolutely necessary.

6.0 Conclusion and Credits

RFI has been a most perplexing problem and will continue to be so as long as manufacturers of computers do not think of it as a problem. I welcome contributions and other suggestions so that we can advance in our fight against RFI. Please direct all suggestions to:-

asirene@ntuvax.ntu.ac.sg

I would also like to thank persons who have offered their advice and experience in RFI problems. Tks.

Kok Chen	AA6TY	kchen@apple.com
Earl Morse	KZ8E	e.morse@zds.com

R. R. Scott	NF3I	ham@wam.umd.edu
Gary Coffman	KE4ZV	gary@ke4zv.atl.ga.us
Tom Bruhns	K7ITM	tomb@lsid.hp.com
Andrew Moore		dmoore@viper.cis.upenn.edu
Steve Byan		steve@hicomb.hi.com
others whom I may have lost their names ...		

The ARRL Handbook offers many helpful information concerning baluns, transmatches, filters and chokes. These will come in helpful for those who want to find out more about antenna and transmission line theory. Information can also be obtained from the ARRL e-mail server. Simply send a mail containing nothing but HELP to info@arrl.org to get started. The server contains some more information on RFI and related problems.

Have fun, down with QRM and RFI. A final word of caution, be sure to know what you are doing or you may fry your equipment in the process, or fry yourself (which will arguable solve all your RFI problems! :). In case of doubt, get an ELMER or someone experienced with electronics to help you out, or to walk you through the steps.

73 de Daniel 9V1ZV
/EX

--

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+-----+-----+
| Daniel Wee | daniel@pandora.lugs.org.sg |
| 9V1ZV      |                               |
| QRP-L #667 | 9V1ZV@amsat.org                   |
+-----+-----+

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Date: Thu, 30 Oct 1997 21:50:43 -0600
From: "Claton Cadmus" <aplitech@Spacestar.Net>
To: "QRP-1" <qrp-1@Lehigh.EDU>
Subject: [29989] Attention Minnesota QRP'ers!
Message-ID: <199710310410.WAA14274@webster.spacestar.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

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The Minnesota QRP Society meets this Weekend!

If you are a Minnesota QRPer, and are in the metro area this weekend please come and join us. This Saturday is our 1ST ANNIVERSARY MEETING. I

hope to see as many of our members as possible to help celebrate! The meeting will be at 1:30pm November 1st located at the Minnetonka Community Center.

And of course, visitors are always welcome too!

Directions to the Center:

Exit 494 at Minnetonka Blvd. (just south of 394) and go west to Williston Road (less than 1/4 mile) and turn right(north). The Community Center is the first building on your right. Plenty of parking right there. If you need talk in, we will have someone on the 145.45 repeater.

73 de KA0GKC Claton Cadmus
E-mail cla@spacestar.net
If you live in Minnesota check out this webpage!
<http://www.qsl.net/mnqrp>

73 de KA0GKC Claton Cadmus
E-mail cla@spacestar.net
If you live in Minnesota check out this webpage!
<http://www.qsl.net/mnqrp>----

73 de KA0GKC Claton Cadmus
E-mail cla@spacestar.net
If you live in Minnesota check out this webpage!
<http://www.qsl.net/mnqrp>

Date: Thu, 30 Oct 1997 21:57:18 -0700
From: gsurrency@juno.com (Gary L L Surrency)
To: qrp-1@Lehigh.EDU
Cc: azqrp@user1.dancris.com
Subject: [29990] W2MBY N/T FOX
Message-ID: <19971030.215719.3438.2.gsurrency@juno.com>

Well, I heard John this evening around 7141 khz. He was readable for a while, and gave him a couple of calls. I also heard neighbor Bob, KI7MN try a few times, but I didn't hear him work him either. I did hear Floyd get him.

John's signal came up to a good S5 on my HW-9 a couple of times, then some KE4 dude started calling CQ on top of him. After I got back from eating supper, I didn't hear him again. Band was fairly quiet compared to last night, but conditions weren't great, either.

It sounded like he had a good signal from NJ for a while, but the timing here just didn't work out for me.

72,

AB7MY

Gary Surrency

Chandler, AZ (Near Phoenix), QRP-L #571, AZ ScQRPions, ARRL VE

Date: Thu, 30 Oct 1997 23:58:55 -0800
From: David Bixler <qrp@netins.net>
To: QRP-L Low Power Amateur Radio Discussion <QRP-L@lehigh.edu>
Subject: [29991] N/T+ Fox (Got him)
Message-ID: <34598FBF.496B@netins.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hello John:

Thanks for the FOX QSO tonight. You were rolling into Missouri tonight like gangbusters! Very easy to copy as you have a great fist. It's really a pleasure to work you.

Congrats on the new callsign. Now you really sound like an old timer!

Best of luck, and hope to work you a couple more times on Fox nights.

72,

Dave Bixler W0CH
Seneca, MO

Date: Fri, 31 Oct 1997 00:03:27 -0500 (EST)
From: W7GVN@aol.com
To: qrp-l@lehigh.edu
Subject: [29992] FS 6 mtr gear
Message-ID: <971031000326_680525103@mrin42.mail.aol.com>

for sale Ramsey FX-50 with CFX factory case . unit is built and has been used as monitor for local rprr. and for communications on the road to hamfests. excelant cond no scratched dents etc, We all know that this is not the top line of equipment but then the price isn't bad. cost new \$178.85 in kit form. yours for (one half the orig cost) only \$90.00 plus shipping and for \$10.00 more ill throw in the radio shack speaker /mic. orig box manual and so on

72/3

w7gyn Rod Tucson

Date: Fri, 31 Oct 1997 00:13:49 EST
From: DYARNES <DYARNES@aol.com>
To: w6toy@pop.erols.com, qrp-l@Lehigh.EDU
Subject: [29991] Re: 2222 design ideas
Message-ID: <6f7852e7.345968e1@aol.com>
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7bit

In a message dated 97-10-30 17:40:12 EST, w6toy@pop.erols.com writes:

<< If you or anyone else should be the design
contest winner, your paper and work belong to NorCal first. >>
I may be misinterpreting you statement, but I don't believe the winner is (or
needs to be) assigning his "rights" or his property to NorCal. Correct me if
I am wrong Doug.

72 de David W7AQK

Date: Fri, 31 Oct 1997 00:26:39 -0500
From: "Wilford D. Lindsey" <70511.3041@compuserve.com>
To: "INTERNET:gsurrency@juno.com" <gsurrency@juno.com>, "W.D. (Doc) Lindsey/K0EVZ" <70511.3041@compuserve.com>, QRP-L Discussion Group <QRP-L@lehigh.edu>
Subject: [29992] W2MBY N/T FOX
Message-ID: <199710310028_MC2-263A-545F@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

Gary:

Very sorry you couldn't hear him. Been there, done that this week when I missed Jim N0UR on Monday. But there are other FOXes coming...!

Got started about an hour and a half late...but did manage to snag him. He gave me a 229 (!) and I felt was 439. Condx very rough with QSB/QRN. No QRM, though. John the FOX was doing a great job--good CW, correct procedure, attention to detail, etc.

It gives me great hope for our hobby and for CW to hear younger guys like John doing such a great job. Will be interesting to see his log.

72/73,

--Doc/K0EVZ qrp-1 861 norcal 2050 cqc 414 ARS 311 FISTS 3868 mn-qrp 19
nj-qrp 69 ak/qrp 139 AR QRP 73 ARCI 9398 ARRL WAS 48/40
DXCC 55/42 <>< FOX Total 10/31/97 10 of 11 + 8 of 9 N/T+ FOX.

Icom 751A Omni V Sierra Argo 515 Norcal 40a SW-40 49er 38S
Mercury Paddles Emtech ZM-1 MFJ 259 MFJ 941D GAP TNT/2 Windom
SLV/W6MMA G5RV Autek QF-1 RS DSP-40

"Things should be as simple as possible, but no simpler"--A. Einstein

Date: 30 Oct 97 16:02:01
From: "mahlon.r.haunschild" <mahlon.r.haunschild@ac.com>
To: n4js <n4js@amsat.org>
Cc: "low power amateur radio discussion" <qrp-1@Lehigh.EDU>
Subject: [29993] RE: 38 Special cases
Message-ID: <9710310529.AA2114@notes2.compuserve.com>
Mime-Version: 1.0
Content-Type: Text/Plain

When I built my 38S, I wanted a fairly tough enclosure, with the controls mounted on what we normally would refer to the top (I prefer these ergonomics for small radios). So, I used a Hammond cast aluminum enclosure big enough to contain the board, which allowed the final amp FET and voltage regulator to be bolted flat to the back wall of the enclosure. The jacks for the antenna, power, and key are also on the back, and the phones jack is on the front. All of the controls are on the top of the box (the lid, actually).

But, before I put it all together, I did a dry run on the assembly and figured out that I had about 5/8" of extra box height between the lid and the bottom. So, in a zealous effort to get rid of extra aluminum, I chucked a Dremel cut-off wheel and arbor in my drill press, set the chuck at the proper height above the drill press table, and simply (!) ran it all the way around the

circumference of the box. It worked GREAT, but I used up a BUNCH of cut-off wheels...

BTW, I used a 10-turn Bourns Knobpot for the main tuning control because it was at hand. OK, ' cause it was cool, too!!

73

Mahlon - N4EEE

Date: Fri, 31 Oct 1997 00:26:52 -0500
From: "Wilford D. Lindsey" <70511.3041@CompuServe.COM>
To: "INTERNET:mikemo@ibm.net" <mikemo@ibm.net>, "W.D. (Doc) Lindsey/K0EVZ" <70511.3041@CompuServe.COM>, QRP-L Discussion Group <QRP-L@Lehigh.EDU>
Subject: [29994] N/T+ fox, gotem!
Message-ID: <199710310030_MC2-263C-3EC6@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

Mike:

Well congrats, OM! Glad you caught the elusive furry creature. I get a great thrill from working FOXes, more than with most DX! Chuck has done a good thing with FOX.

John indeed *was* doing a good job! He shows real promise. Made me proud.

72/73,

--Doc/K0EVZ qrp-l 861 norcal 2050 cqc 414 ARS 311 FISTS 3868 mn-qrp 19
nj-qrp 69 ak/qrp 139 AR QRP 73 ARCI 9398 ARRL WAS 48/40
DXCC 55/42 <>< FOX Total 10/31/97 10 of 11 + 8 of 9 N/T+ FOX.

Icom 751A Omni V Sierra Argo 515 Norcal 40a SW-40 49er 38S
Mercury Paddles Emtech ZM-1 MFJ 259 MFJ 941D GAP TNT/2 Windom
SLV/W6MMA G5RV Autek QF-1 RS DSP-40

"Things should be as simple as possible, but no simpler"--A. Einstein

Date: Fri, 31 Oct 1997 00:26:43 -0500
From: "Wilford D. Lindsey" <70511.3041@CompuServe.COM>
To: "INTERNET:MichaelN@cycat.com" <MichaelN@cycat.com>, "W.D. (Doc) Lindsey/K0EVZ" <70511.3041@CompuServe.COM>, QRP-L Discussion Group <QRP-L@Lehigh.EDU>
Subject: [29995] First FOX!!! YaHooo
Message-ID: <199710310030_MC2-263C-3EC4@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

Michael:

Well congrats, OM! Glad you got John tonight. To me there is no thrill like hearing that elusive furry creature sending your call through a pileup.

Wasn't that young man doing a great job?! It made me proud to hear him. Anyway, congrats again.

72/73,

--Doc/K0EVZ qrp-l 861 norcal 2050 cqz 414 ARS 311 FISTS 3868 mn-qrp 19
nj-qrp 69 ak/qrp 139 AR QRP 73 ARCI 9398 ARRL WAS 48/40
DXCC 55/42 <>< FOX Total 10/31/97 10 of 11 + 8 of 9 N/T+ FOX.

Icom 751A Omni V Sierra Argo 515 Norcal 40a SW-40 49er 38S
Mercury Paddles Emtech ZM-1 MFJ 259 MFJ 941D GAP TNT/2 Windom
SLV/W6MMA G5RV Autek QF-1 RS DSP-40

"Things should be as simple as possible, but no simpler"--A. Einstein

Date: Thu, 30 Oct 1997 18:34:26 +0000
From: Leon Heller <leon@lfheller.demon.co.uk>
To: sassoli@iilwh10.settimo.italtel.it
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [29996] Re: Oscillator using MAR/ERA
Message-ID: <dY7jgLAYMNW0EwLK@lfheller.demon.co.uk>
MIME-Version: 1.0

In message <3458916E.805F29D3@iilwh10.settimo.italtel.it>, Paolo Sassoli <sassoli@iilwh10.settimo.italtel.it> writes

>Hi to all,

> has anyone any experience in using the monolithic amplifier

>from Mini-Circuits Lab.(MAR family or ERA family) as active device for
>oscillators?
>Will it be possible to add a "reaction ring" to one of them and bring it
>to oscillate?
>Any ideas?
>Thanks in advance.
>

Paolo IK2LNH

Ian Hickman did an article in EW about this some years ago. They don't
make very good oscillators.

73, Leon

--

Leon Heller: leon@lfheller.demon.co.uk <http://www.lfheller.demon.co.uk>
Amateur Radio Callsign G1HSM Tel: +44 (0) 118 947 1424
See <http://www.lfheller.demon.co.uk/rcm.htm> for details of a
low-cost reconfigurable computing module using the XC6216 FPGA

Date: Fri, 31 Oct 97 07:17:35 UT
From: "Carlos J. Caro" <cjcaro@classic.msn.com>
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [29997] RE: Copper to Aluminum, HOW?
Message-ID: <UPMAIL02.199710310714520070@classic.msn.com>

jim and all...

McMaster Carr sells an aluminum flux that with a high heat iron or propane
torch can be used for tinning aluminum with tin/lead solder. You can then
solder your copper conductor to the tinned area. Since you are at a molecular
level , there is no oxidation at the joint. Back when the radio and tv
builders went to aluminum chassis, this is how they made grounding points.
hope it helps es 73,
Carlos KB0REI

From: owner-qrp-1@Lehigh.EDU on behalf of Bill Howell
Sent: Thursday, October 23, 1997 21:03
To: Low Power Amateur Radio Discussion
Subject: Re: Copper to Aluminum, HOW?

Jim, NOUR wrote:

What is the best

NTE123	T0-39	75v	40v	6v	.8A	800mW	300	200typ	4dB	30
NTE123A	T0-18	75	40	6	.8	500	300	200typ	4	30
NTE123AP	T0-92	75	40	6	.6	625	300	200typ		

NTE123AP EQUIVALENTS:

2N2222	T0-92	60v	30v	5v	.6A	625mW	250	40-500	4dB	30
2N2222A	T0-92	75	40	5	.6	625	300	75-375	4	25
2N3904	T0-92	60	40	6	.2	625	300	100-400	5	8
2N4401	T0-92	60	40	6	.6	625	250	40-500	3-4	7
BC547	T0-92	50	45	6	.1	625	300	125-900	10	10
BF224	T0-92	45	30	4	.05	350	600	100	2.5	3
MPS2222A	T0-92	75	40	5	.6	625	300	75-375	4	25
MPS3904	T0-92	60	40	6	.1	625	200	100-400	5	8
MPS6520	T0-92	40	25	4	.1	625	200	100-400	3	8
MPS-A20	T0-92	40	40	4	.1	625	125	40-400		8

NTE123A EQUIVALENTS:

2N2219	T0-18	60v	30	5	.8	800	300	200typ	4	30
2N2219A	T0-18	75	40	6	.8	800	300	50-300	4	25
2N2222	T0-18	60	30	5	.8	400	300	200typ		30
2N2222A	T0-18	75	40	6	.8	400	300	50-300	4	25
BC107A	T0-18	50	45	6	.2	600	300	110-450	10	
BC109A	T0-18	30	25	5	.2	600	300	240-900	4	
SK3444	T0-18	75	40	6	.8	1800	300	200typ		
SK3854	T0-92	75	40	6	.8	1200	300	200typ		

NTE123 EQUIVALENTS:

SK3020	T0-39	30	25	7	.8	1000	150	125typ		
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PNP TRANSISTORS: (NTE159 Equivalents)

2N2905	T0-18	-60	-40	-5	-.6	600	200	25min		30
2N2905A	T0-18	-60	-40	-5	-.6	600	200	100min		30
2N3906	T0-92	-40	-40	-5	-.2	625	250	80min		10
MPS2907	T0-92	-60	-40	-5	-.6	625	200	50min	4	30
MPS2907A	T0-92	-60	-60	-5	-.6	625	200	100min	4	30
MPS3906	T0-92	-40	-40	-5	-.2	625	250	100min	4	10

NOTES:

T0-92 = Plastic encapsulated transistor

T0-39 = Standard size metal-can transistor (.35" dia.)

T0-18 = Small metal-can transistor (.195" dia)

Ic = Continuous collector current (not breakdown) class A; for class C or intermittent, can be higher at your own risk

Ft = Gain bandwidth product (i.e., highest freq. with gain)

hfe= Small-signal current gain at Ic=1mA

NF = Noise figure in dB (3dB or less considered low noise amp)

Cin= Input capacitance; most Cout's are ~Cin/2

TO OUR EUROPEAN FRIENDS: I included a few European transistors as

seen in SPRAT articles, but mostly out of ignorance. I'd appreciate hearing from you on what your common NPN/PNP's are, and I'll add it to the above and repost the updated version later. Tnx.

GL es 7222, Paul NA5N

Date: Fri, 31 Oct 1997 03:07:30 -0500
From: Ed Tanton <n4xy@bellsouth.net>
To: mikemo@ibm.net, Charles Cassion <ccashion@spdmail.spd.dsccc.com>
Cc: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [29999] Re: Dummy loads and resistors
Message-ID: <3.0.1.32.19971031030730.00a795b0@mail.atl.bellsouth.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Mike... You have undoubtedly used regular wirewound (e.g. INDUCTIVE) resistors. The wire they are made of is wound circularly, causing your SWR. Dummy loads must be made from NON-INDUCTIVE resistors. SOME of the nice metal-cased Dale resistors are marked "NR" or "NI" and can be dummy loads. Others are made by Carborundum, and do not use wire-and in some other cases the wire is somehow scramble-wound in such a manner that the inductance is greatly reduced.

Not all WW resistors have are hollow ("hole in the middle".) I even have some that exhibit some sort of avalanche voltage before they will even conduct at all-probably snubbers in motor circuits-or something. With decent little handheld inductance meters being sold <\$100, and even cheaper 555 circuits around, every ham ought to get-or make-one just for this alone-if he wants to build dummy loads from unknown resistors!

I personally have NEVER seen a rectangular non-inductive resistor. The only ones I have seen have been the metal-jacketed Dale type or cylindrical in shape (some solid, most hollow.) Even at AUDIO frequencies, WW resistors are not real good loads!

You even have to be careful of the smaller resistors these days... many of the "modern" 1W & 2W to 5W resistors are simply WW resistors in a nice small package.

I know you wanted to build your own, but MFJ sells some nice, smaller DLs... and there are quite a few surplus DLs available relatively inexpensively. Good luck!

72/73 ZUT!!!

Ed Tanton N4XY EMAIL: n4xy@bellsouth.net
189 Pioneer Trail
Marietta, GA 30068-3466 TEL: (770)579-3933 V/MBX/FAX

Date: Fri, 31 Oct 1997 01:13:42 -0700 (MST)
From: Paul Harden <pharden@aoc.nrao.edu>
To: ki6ds@dpol.k12.ca.us
Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>
Subject: [30000] Re: No Change in NorCal 2222 Contest Rules
Message-ID: <Pine.SOL.3.91.971031010540.8839B-100000@zia>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Thu, 30 Oct 1997 ki6ds@dpol.k12.ca.us wrote:

> But, we do need some kind of contest for Pacificon, so
> don't lose heart.

Can we at least use PNP's for PacifiCon?

> I really liked Gary Surrency's suggestion of using sockets for transistors.

Will make it easier for Gary and I to change over to PNP's after Dayton.

> A simple socket is a SIP inline strip. Just cut off 3 pins, and voila,

Wow, what luck. PNP's just happen to have only 3 leads too.

> 72, Doug, KI6DS/M0BIV

7222, Paul NA5N

Date: Fri, 31 Oct 1997 04:55:49 -0800
From: Terres Family <terresfm@ncia.net>

To: qrp-l list <qrp-l@Lehigh.EDU>
Subject: [30001] two wire yagi
Message-ID: <3459D555.108@ncia.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Book Review:

John D Heys G3BDQ, in Practical Wire Antennas Effective HF Designs for the Radio Amateur, RSGB 1993 printing, page 72, he describes a two element indoor beam with a switched single wire parasitic element, the driven element is a folded dipole, feed point impedance is 80 ohms so a good match to 75 ohm feed, he gives dimensions for 10 and 15 meters, and quotes the gain as 5.5 db over a dipole. The interesting point is he uses a MERCURY TILT SWITCH on a pivot with a weight and a cord to pull to alter the parasitic element length between a reflector and a director.

His dimensions for 15 meters: 19' 2" 300 ohm twinlead fed in the center, plus 1' 6" more wire on each end for the driven element spacing 6' 6"

20' 10" director and 2' 8" more changes it to a reflector, he uses one switch

I have never bilt one. Really like the book though, my copy cost about \$17, and thought it well worth it.

72

Jerry AA10F

Date: Fri, 31 Oct 1997 05:32 CST
From: FAITHD@dnr.state.wi.us (Don C. Faith III, AM/7, \((608\) 267-3135)
To: qrp-l@Lehigh.EDU
Subject: [30002] Re: dummy loads and resistors
Message-ID: <009BC946C94D20E4.D4A6@dnr.state.wi.us>

The best resistors I have found for dummy loads are the Caddock MP series of non-inductive power resistors. They come in T0-126 (15W, MP915) and T0-220 (30W, MP930 and 50W, MP850) sizes. I discovered them in the Tentec transverters: It is what they use to soak up the incoming RF (up to 20W).

I used 3 of the 30W versions to make a moderate power (i.e. 50W+) version of the SVSI indicator.

Unfortunately, the only ones I know who has them is Allied Electronics (800-433-5700, <http://www.allied.avnet.com/>). They have a \$50

minumum order so if you want some, get together with a few of your buddies or do it through your local club.

Mouser also sells some 5W metal oxide power resistors that I expect would be non-inductive.

Good Luck, 73 de N9WR

Date: Fri, 31 Oct 1997 11:32:15 GMT
From: Rogerio Gonzaga <gonzaga@med.up.pt>
To: bmug@gwl.com
Cc: qrp-l@lehigh.edu
Subject: [30003] Re: Antenna Help
Message-ID: <199710311132.LAA04301@mail.med.up.pt>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi, Brad and gang,

About..

- > I have more than one radio and more than a few antennas.
- > I would like to get to all my antennas from either spot.

I have in my shack a couple of old B&W coaxial switches than can interchange the aerials of two radios and two aerials (or two sets of each). You can connect Radio A to aerial 1 and Radio B to aerial 2 OR Radio A to aerial 2 and Radio B to aerial 1. The system is supposed to allow simultaneous work of both radios using up to two kilowatts PEP. I have risked to push 1 kW+ in one radio while the other one was tuned to another band (the proximity of aerials did not encourage me to tune them in the same band) and I had no problems at all, except that in some bands there could be some (but acceptable) interference, for example while transmitting on 40 meters with one radio and listening to the 15 meters with the other. However, just about the same interference exists if I do not use this kind of switch, as the bands are harmonically related and the aerials are not far away from each other. I have opened one of those switches and the switching device inside seemed very thin, but actually it works perfectly.

These switches are now very hard (or almost impossible) to find in the CT1 market, but this does not imply that they are not made anymore (as they never became very popular around, our salesmen probably did not want to import them anymore).

I have currently two at work and I am quite happy with them. One of them connects a set of three radios (QRP++, HW-9 lowered down to 750 mW, and full-power FT-757, distributed by further regular coaxial switches) from one side, and my seldom used QRO+ radio system (FT102 + Dentron Clipperton L) on the other, to my two chief sets of HF aerials (TH6-Windom-160m Marconi from one side, 12AVQ, T2FD and 36 m long LW on the other), both equally further distributed by a couple of (B&W) coaxial switches. The system works quite well, I have run lots of QRP contests and at least one major QRO one, driving high power, without any problem.

I think idea this could be usefull to you Brad, if you can find one of those switches, so good luck.

Best 72/73 de Roger, CT1ETT

Prof. Rogerio A. F. Gonzaga, MD, PhD
Surgical Professor at the Faculdade de Medicina do Porto - Portugal
Ex-Honorary Surgical Registrar at the Hammersmith Hospital - London, UK
Member of the Portuguese College of Surgeons

Radio Amateur CT1ETT		QTH Loc IN51re
G-QRP Club # 8673	ISWL # CT-20574	QRP-L # 516
NorCal QRP Club # 2130	ARS # 268	REP # 840
	FISTS # 2878	
Email: gonzaga@med.up.pt	OR	rafg@esoterica.pt

Date: 31 Oct 1997 11:38:17 +0000
From: Dave.Ackrill@LotusXchgPG.powergen.co.uk
To: qrp-l@Lehigh.EDU
Subject: [30004] Re: Norcal 2222 Design Contest
Message-ID: <971031113817Z*/G=Dave/S=Ackrill/O=LotusXchgPG/PRMD=POWERGEN/
ADMD=CWMAIL/C=GB/@MHS>

Can we do one using the BC108 over here? That seems to be the
"ubiquitous" transistor this side of the pond. I even used one in the

audio amplifier for my 10GHz transceiver (see earlier posting) HI.....

Looking forward to the designs for rigs using 2N2222 transistors, my designing skills are not up to this challenge I am afraid. Never did get the hang of using the design curves for biasing at college!

What about those of us that do not have easy access to WWW? How will the designs be published for those of us who are 'web challenged'? How about putting them in the NorCal magazine please?

Cheers de Dave (G0DJA)
dave.ackrill@pgen.com

Date: Fri, 31 Oct 1997 07:57:30 -0500
From: "Wilford D. Lindsey" <70511.3041@compuserve.com>
To: QRP-L Discussion Group <QRP-L@lehigh.edu>
Cc: "W.D. (Doc) Lindsey/K0EVZ" <70511.3041@compuserve.com>
Subject: [30004] WTB:Kenwood TS930
Message-ID: <199710310800_MC2-263C-5FBD@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

Gang:

Looking for a pristine, fully-loaded Kenwood TS930. If you have one, let's talk. Have an interesting possible deal/trade in mind :-). Thanks!

72/73,

--Doc/K0EVZ qrp-l 861 norcal 2050 cqz 414 ARS 311 FISTS 3868 mn-qrp 19
nj-qrp 69 ak/qrp 139 AR QRP 73 ARCI 9398 ARRL WAS 48/40
DXCC 55/42 <>< FOX Total 10/31/97 10 of 11 + 8 of 9 N/T+ FOX.

Icom 751A Omni V Sierra Argo 515 Norcal 40a SW-40 49er 38S
Mercury Paddles Emtech ZM-1 MFJ 259 MFJ 941D GAP TNT/2 Windom
SLV/W6MMA G5RV Autek QF-1 RS DSP-40

"Things should be as simple as possible, but no simpler"--A. Einstein

Date: Fri, 31 Oct 1997 07:03:57 -0600
From: "Harley L. Miller" <hmliller@sound.net>

To: qrp-1@Lehigh.EDU
Subject: [30004] MPS2222As at AmeriTech
Message-ID: <3459D73D.2417@sound.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Ameritech has MPS2222As listed for .10 each in small quantities (1-9),
and .08 each (10-99).

PN2222A - .08/.07

2N2222A - .29/.26

No minimum order.

Great catalog.

<http://www.techam.com>

Usual disclaimer.

Harley L. Miller hmliller@sound.net
WB0ROQ QRP-L #373

Date: 31 Oct 1997 13:53:25 +0000
From: Dave.Ackrill@LotusXchgPG.powergen.co.uk
To: qrp-1@Lehigh.EDU
Subject: [30005] Whoops !?
Message-ID: <971031135325Z*/G=Dave/S=Ackrill/O=LotusXchgPG/PRMD=POWERGEN/
ADMD=CWMAIL/C=GB/@MHS>

Just read the bit below from one of the postings:-

>>Lets see 10dB gain is about like taking that 5 watts and making it a 4-fold
increase?? Oh what fun on FOX NITE!

Now I have a rule of thumb that says anything raised by 10dB is nearly
equivalent to multiplying by 10.
So 5 Watts in to this antenna would appear to be the same as 50W out. A four
fold increase would only
be 20W, wouldn't it?

Usual disclaimers about antenna gain claims apply, as in;

is that 10dB gain over a dipole, or a bit of wet string? (you need that extra
bit of information as in dBd for gain
over a dipole or dBi for an isotropic radiator. Would dBws be gain relative

to wet string HI)

is this claimed 10dB from a simple two element yagi actually breaking the laws of physics?

Remember a simple, cynical, view is "if it appears too good to be true, it probably is".

Cheers de Dave (G0DJJA)
dave.ackrill@pgen.com

"I would like empirical methods better if the results were more predictable"

Date: Fri, 31 Oct 1997 08:06:52 -0600
From: "Rattray, Bruce" <Rattray@siast.sk.ca>
To: "'QRP-L'" <qrp-l@Lehigh.EDU>
Subject: [30006] W2MBY
Message-ID: <ABB04875E11AD01191A40000F83092BE3B3F25@stone.siastr.sk.ca>
MIME-version: 1.0
Content-type: text/plain
Content-transfer-encoding: 7BIT

Well I finally worked my first N/T fox...and I don't know how we did it...there was another, stronger station, not quite zero beat with you John...what I had to do was to copy parts of your transmissions during the 'key up' times of the other stronger station until I had the exchange information...HI HI...so many thanks for your patience and GOOD ears John!...72 - Bruce(VE5RC) QRP-L#886 "QRP! How sweet it is!"

e-mail: rattray@siast.sk.ca

Date: Fri, 31 Oct 1997 06:02:55 -0800
From: Vic Rosenthal <rakefet@rakefet.com>
To: adams@chuck.dallas.sgi.com
Cc: qrp-l@Lehigh.EDU
Subject: [30007] Re: Saturday NorTex Meeting
Message-ID: <3459E50F.5201@rakefet.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Chuck Adams wrote:

>
> Just in case, for those in the vicinity of the Metroplex
> Dallas/Ft Worth arena.
>
> Meeting 10am, 6200 LBJ Freeway

It just happens that a distinguished foxhunter from CA will be in Dallas this weekend. No, really, I'm here on business until Sunday, and I'd love to meet you all (see how I'm learning the language?). The only problem is that I don't have a car and would need a ride. If any of you Texans could arrange that, I'm staying at the Holiday Inn/Market -- Room 136. I worked from 9am till 11 pm yesterday and Wednesday, but you can leave a message at the hotel -- I'll try to check email again this evening (my computer is in use all day where there isn't a phone). If you call the hotel, be sure to give them the room number, they tend to screw up messages.

Hope to meet you Saturday!

Vic Rosenthal K2VCO

Date: Fri, 31 Oct 1997 09:18:50 -0500 (EST)
From: ARDUJENSKI@aol.com
To: qrp-l@Lehigh.EDU
Subject: [30008] DON'T SHOOT THE MESSENGER!
Message-ID: <971031091609_474090972@mrin42.mail.aol.com>

Have been getting lots of notes about the hi gain noted on the WIRE YAGI. The values seemed high but who am I to argue...that is why I put this out for comment. Here is the site :
<http://funnelweb.utcc.utk.edu/~cebik/radio.html>
.The book on Yagi's I read was showing only about 7dB gain. I was going to put up a BOBTAIL until I read about this YAGI WIRE TWO ELEMENT. so just trying to sort thru all this. I have a DOUBLE ZEPP now but the band is so lousy (40 NOVICE) these past several days that it has been hard to get a gud reliable report.

I am just trying to see if in practice these work well!!!

Date: Fri, 31 Oct 1997 10:10:33 -0500 (EST)
From: aa8yo@tir.com (Bob Fox)
To: qrp-l@Lehigh.EDU

Subject: [30009] UR3IDD
Message-ID: <199710311510.KAA13874@sun.tir.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Gang,

I worked UR3IDD / Evgeny, on my way to work on 40 meters last month. I was using my trustworthy MFJ 9040, running 5 watts to my likewise trusty Hustler antenna. He gave me a 569 !!!!! Obviously, I would like to have a QSL card from him and want to send it direct. The only information I could find was on the Buckmaster database, and it is not complete - name, town, and country - no address or zip or anything.....

Is there anyone on the list that can help me out ? Thanks.

73 - Bob / AA8Y0

e-mail: aa8yo@tir.com
FISTS #3056 QRP-L #1174
QRP-ARCI #9487 MI-QRP #1595
Amateur Radio Operator
Amateur Civil War Historian

Date: Fri, 31 Oct 1997 08:09:14 -0700
From: Jess Gypin <jgypin@bi.com>
To: qrp-l@lehigh.edu
Subject: [30010] NorCal Paddle Powder Coated Base Information
Message-ID: <3459F49A.2247@bi.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

If there is any interest and for those of you that cannot get access to the web page, here is the information for a powder coated base for the NorCal paddle kit...

If you are interested in a powder coated base, San Luis Machine has them available. This will save you the hassle of finishing your base. You will receive a beautifully painted base with a hard, durable

paint coating that has been baked on. The cost is \$15 plus your untouched base as a core trade in, or \$20 and you keep your base. Colors available are: Red, Blue, Black, White and Gray. To order send \$15 plus your old base, or \$20 without the base and \$3 shipping and handling to:

San Luis Machine Company
Unit F2
200 Suburban Rd.
San Luis Obispo, Ca., 93401

Please include a self-addressed mailing label with your order.

FYI

Jess N0TFI

Date: Fri, 31 Oct 1997 07:59:11 -0700
From: "Ron Smith" <resmith@primenet.com>
To: "qrp-1@lehigh.edu" <qrp-1@Lehigh.EDU>
Subject: [30011] Re: [DX] Last two
Message-ID: <01bce60d\$8c217ee0\$3822a5ce@Presmith>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

-----Original Message-----
From: Frank Smith <ah0w@primenet.com>
To: Ron Smith <resmith@primenet.com>
Date: Thursday, October 30, 1997 8:19 AM
Subject: Re: [DX] Last two

>Anyway I agree with the PY on this issue. "Last two", if
>nothing else, is illegal in the USA. I researched that matter
>2 years ago and asked for a clarification from the FCC and
>received a letter from then, as well as from the Regulatory
>Liaison Specialist at the ARRL, both of which clearly stated
>that abbreviated callsigns are not legal (at least in the USA).
>

Frank, I didn't mean to indicate that I dis-agreed with Cesar, only that I didn't have an understanding of the correct procedure. I think many tend to operate as the group does, not necessarily following the U.S. rules or even logical operating procedures.

>I have been on 13 DXpeditions including some CQWW contests and
>have to say that when we get "last two" it slows us down
>terribly, especially when we're using computer logging. Most
>of your experienced DXpeditioners and contesters agree with
>that, and will state that it's far more efficient if people
>called in with full and legal callsigns - you can log them
>with one pass instead of two and move on to the next one.
>

>From a computer logging position I couldn't agree more -- You definately can avoid many dupes -- but on the other hand if the calling station is drumming out everyone else, why not get the guy and get rid of him so the weaker stations can operate you? If I had MY way, amps would be dis-allowed during contests giving everyone who operated the legal limit of their transceiver an equal chance.

>I was the one who organized the K7K Kure operation of a few
>weeks ago, and this "last two" business really was a vexation
>for us - purely a product of these so-called "DX" net where
>they teach guys to do that, probably because the NCO's themselves
>are generally poor operators who can't copy full callsigns.
>It got to the point where we simply wouldn't respond to any
>thing less than a full callsign and guys didn't get in the
>logs as a result.
>

Perhaps the contest and special event operators need to announce every few minutes "full calls only" -- if this were done by everyone, perhaps we could be able to get everyone away from the "last two" procedure.

Ron Smith
KD7VD
Boise, ID

Date: Fri, 31 Oct 1997 10:25:15
From: Steven Weber <kd1jv@moose.ncia.net>
To: qrp-l@Lehigh.EDU
Subject: [30011] 2222 design
Message-ID: <3.0.1.16.19971031102515.12072cae@mailhost.ncia.net>

Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Howdy 2222ers

Ha! You can build a CA3028 out of three 2222's and a few resistors. Makes a good mixer and IF amp. Be careful though, it's not hard to make them oscillate. A high gain tuned amplifier is about as stable as an LA driver at rush hour, don't take much to set 'em off. Except of course, if you want it to oscillate :-)

T- count is up to 13 now, only 9 left for the VFO and Tx. Going to be tight.

72,
Steve, KD1JV....In the White Mountains of New Hampshire

"Melt Solder"

Date: Fri, 31 Oct 1997 10:39:45 -0500
From: "JakeCart" <JakeCart@ix.netcom.com>
To: <qrp-l@lehigh.edu>
Subject: [30012] How do I protect my HB projects with a diode??
Message-ID: <199710311539.JAA17900@dfw-ix5.ix.netcom.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Hi group:

I have another beginner's question.

My attempts at homebrew are going pretty well (2 successes out of 3 attempts). The "loud LM386 audio amp" from QRPP and the CQpr MRX-40 work great. But I messed up the power connection on my Ten-Tec amp and cooked my 3.3 ohm resistor (they really do give off a puff of smoke).

My question is this: I have a bunch of 1N4004 and 1N4007 diodes that were in my Dan's Small Parts "grab bag". Can I wire one of those diodes into the power lead for my HB projects to that I don't damage any more of these very fine kits?

Thanks,
Jake [N4UY]

QRP-L #821, G-QRP #9557, AK/QRP #175, CQrp #46, NJ-QRP #74, NorCal#1457,

ARCI #9392, FISTS #3450
WAS W/C 49/46 need DE
WAS QRP W/C 43/36

Date: Fri, 31 Oct 1997 08:06:03 -0500
From: Stephen Gibson <SWGibson@worldnet.att.net>
To: qrp-l@Lehigh.EDU
Subject: [30013] Black Widow
Message-ID: <19971031154156.AAA24992@DEFAULT>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

OMs:

Sorry, the "Black Widow" and coil advertised this week has been sold. Great response. Wish I had a dozen!!

Steve, WB4NBI

Date: Fri, 31 Oct 1997 10:53:25 -0500
From: "Kevin F. Glynn" <kfglynn@prodigy.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: [30014] Anyone have pics on web for new Paddle Powder Coated Bases?
Message-ID: <199710311553.KAA06982@mail1y-int.prodigy.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Hi gang,

Does anyone have pics for the new bases? Norm Abrahms will be calling me today to see if they can get someone to sand blast my current base nice and shiny!

72 Kevin N2TO
Brooklyn, NYC
kfglynn@prodigy.net

Date: Fri, 31 Oct 1997 10:17:16 -0600 (CST)
From: Bill Morris Denton <bdenton@tenet.edu>
To: qrp-l@Lehigh.EDU
Subject: [30015] Doc/TS-930
Message-ID: <Pine.OSF.3.96.971031100232.5701B-100000@thurman.tenet.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Doc I deleted you posting before I decided to respon about your query on WTB a TS-930.

I just looked at Burghardt webb page on used equipment. They have two TS-930's listed. I have delt with them on numerous occasions and have found them to be "above and beyond" to deal with. I purchased two used radio's and amp from them and all were in prestine condition. I also bought a new FT990 along with other odd's and ends. I beleive they offer 90 day warrantly on used equipment. I was looking to purchase either a 930 or 940 from them until I found a 940 locally. Sorry I missed your E-Mail addr.

73 Bill W5SB

Date: Fri, 31 Oct 1997 11:18:10 -0500 (EST)
From: K5BDZ@aol.com
To: JakeCart@ix.netcom.com, qrp-l@Lehigh.EDU
Subject: [30016] Re: How do I protect my HB projects with a diode??
Message-ID: <971031111758_1769563432@mrin45.mail.aol.com>

Jake

YES you can wire the diode into the power line to prevent problems in future.

- 1) Wiring diode in SERIES -properly polarized- with positive power line immediately on entry into chassis is great but will give you approx .7 volt (7/10 volt) loss which can make a difference sometimes when battery power gets low toward cut-off voltage for some IC's etc.
 - 2) Preferred approach is to bring positive 12v power into chassis, Then thru a fuse (aren't everyone's rigs fused?), Then to on/off switch. BETWEEN fuse and switch, have a diode to ground, Polarity PROPERLY installed. That way, theoretically, wrong power polarity will shunt to ground and blow the fuse thus saving your equipment.
- That is the simple approach. Now let's see what others will devise that's better and more better, and more more gooder.
- Bill, K5BDZ

Date: 31 Oct 1997 16:28:05 +0000
From: Dave.Ackrill@LotusXchgPG.powergen.co.uk
To: qrp-l@Lehigh.EDU
Message-ID: <971031162805Z*/G=Dave/S=Ackrill/O=LotusXchgPG/PRMD=POWERGEN/
ADMD=CWMAIL/C=GB/@MHS>

Have tried a couple of times to send this direct, but the REPLY option
just gets bounced with the following message:-

----- The following addresses had permanent fatal errors -----
<JayMiller@aol.com>

----- Transcript of session follows -----
... while talking to air13.mail.aol.com.:
>>> RCPT To:<JayMiller@aol.com>
<<< 550 JayMiller is not accepting mail from this sender
550 <JayMiller@aol.com>... User unknown

So I am posting this to the group in the hope that JayMiller@aol.com
will see it and address the server problem :-)

Glad that you enjoyed the note on 10/24GHz activity over here. Yes,
different areas have their own problems HI....

I suppose that, at 35 years old, I'm now an "old timer" as I've held a
licence since the early 1980s! Perhaps I should buy a rocking chair and
start all my overs with "I remember when..... "

However, I did used to enjoy hilltopping with microwave gear, and I am
glad that equipment is improving and distances worked are getting longer,
but I do mourn the loss of the old WBFM gear. Like the AM stuff on HF,
it was just so easy to build.....

Cheers de Dave (G0DJA)

Date: Fri, 31 Oct 1997 10:30:55 -0600
From: "Rattray, Bruce" <Rattray@siast.sk.ca>
To: "'QRP-L'" <qrp-l@Lehigh.EDU>
Subject: [30018] Fox tales
Message-ID: <ABB04875E11AD01191A40000F83092BE3B3F26@stone.siastr.sk.ca>

MIME-version: 1.0

Content-type: text/plain; charset="iso-8859-1"

Content-transfer-encoding: 7BIT

...picture this...it's Saturday morning, 7:00 a.m....the location is the Melrose restaurant on Albert Street, downtown Regina...this is the weekly gathering of local amateurs where they swap stories over breakfast... ..Larry (ve5tp), Bart (ve5cpu), Sam (ve5sf) had arrived early and were settling into their booth...Larry noticed a female sitting in a booth nearby....

...Her black hat pulled slightly down over her forehead and dark sunglasses suggested an air of mystery and confidence.....she approached the trio...

..."...can we talk?..."...her whispered voice immediately betraying any semblance of confidence ..

...Larry knew this voice..."...Bonnie?...is that you?...

..."...yes ... I desperately need your help ...I hope you can help..."...

...asking the inevitable question, Sam said..."...what's wrong Bonnie?..."...

Bonnie quickly rushed through a summary of the last few weeks....the "bar" scene...shortlong...long shortshortshort...the holes in the backyard...it's all up here now...the black eyes...

...Bart turned to Sam and Larry... '...I've heard of this...but I can't really recall the story..." ...

...Larry sighed..."...I do...and I never thought this would ever happen in amateur radio...I thought it was just a tale...part of the folklore of ham radio...but now I realize it's all too true.....it's the dreaded QRP Black Hole Syndrome!..."

Bonnie said..."...I'm confused...what is this black hole thing?..."...

Larry said... '...not here...let's go to the club station and I'll tell you all about it..."...

...the waitress, approaching the booth for the usual orders, stood there with surprise and a question mark written all over her face as four people quickly left the Melrose that morning...

QRP! It says it all!

72 - hambly, the Scribe.

Date: Fri, 31 Oct 1997 10:04:59 -0600

From: n5inz@juno.com (John M Andrews)
To: kd1jv@moose.ncia.net
Cc: QRP-L@Lehigh.EDU
Subject: [30019] Re: 2222 design
Message-ID: <19971031.100500.3222.13.N5INZ@juno.com>

On Fri, 31 Oct 1997 10:25:15 Steven Weber <kd1jv@moose.ncia.net> writes:
>Howdy 2222ers

>
>Ha! You can build a CA3028 out of three 2222's and a few resistors.
>Makes a
>good mixer and IF amp. Be careful though, it's not hard to make them
>oscillate. A high gain tuned amplifier is about as stable as an LA
>driver
>at rush hour, don't take much to set 'em off. Except of course, if you
>want
>it to oscillate :-)

>
>T- count is up to 13 now, only 9 left for the VFO and Tx. Going to be
>tight.

>
>72,
>Steve, KD1JV....In the White Mountains of New Hampshire

>
>"Melt Solder"

>
>

Hi Steve:

Posted the same message a few days ago. What I failed to mention is that
the T0-18 metal package might
be the best bet AND you might want to match'em.

Got a power line suppressor per your directions for the SASA. Now if I
can just find the time. Got any
you can spare?

72, John-N5INZ

Date: Fri, 31 Oct 1997 11:23:10 EST
From: n4so@juno.com (charles k brown)
To: qrp-l@Lehigh.EDU
Subject: [30020] Ten-Tec T-Kit 1203
Message-ID: <19971030.232123.10975.4.n4so@juno.com>

Dummy Loads

Ten-Tec has a kit dummy load, the model 1203.

Details in a text file-

Ken Brown, N4SO

QTH nr Mobile, AL/ EM50tk

qrp-l #622

n4so@juno.com

Date: Fri, 31 Oct 1997 18:43:25 +0200

From: Arjen Raateland <Arjen.Raateland@vyh.fi>

To: K5BDZ@aol.com, QRP-L <QRP-L@Lehigh.EDU>

Subject: [30021] Re: How do I protect my HB projects with a diode??

Message-ID: <345A0AAC.7ACE@vyh.fi>

MIME-version: 1.0

Content-type: text/plain; charset=iso-8859-1

Content-transfer-encoding: 8bit

K5BDZ@aol.com wrote:

> YES you can wire the diode into the power line to prevent problems in future.
> That is the simple approach. Now let's see what others will devise that's
> better and more better, and more more gooder.
> Bill, K5BDZ

Hi Bill & all,

Sprat had a small article about using a power P-channel MOSFET in series with the power supply to protect against wrong polarity. You will need a few (18 v) zener diodes as well. The benefit would be no fuse blowing and a negligible voltage drop (less than with a Schottky power diode), IF you have the right FET (low Rds (ON)). I'm not 100% sure, but it might have been Sprat #86.

While 5x20 mm fuses are expensive here, the right type of power FET for this purpose are even more expensive and hard to get by. With some foresight I picked one (just one *?&# " %/) up at a large discount long before I knew about the protection circuit. I tried the circuit from Sprat and it worked as advertised. It was a bit hard to figure out exactly why it was done the way it is, but in the end it made sense. With P-channel enhancement FETs just about everything is a bit topsy-turvy anyway.

Now if somebody would find a hoard of suitable FETs on the cheap ...

73, oh2zaz

--

Arjen Raateland
Finnish Environment Institute
SAS Support
phone +358 9 4030 0457

Date: Fri, 31 Oct 1997 08:42:19 -0800 (PST)
From: "S. Lee" <slee@u.washington.edu>
To: "W. Daniel, 9V1ZV" <daniel@pandora.lugs.org.sg>
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [30022] Re: Computer generated noise help wanted.
Message-ID: <Pine.A41.3.95b.971031082948.60998B-100000@homer31.u.washington.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

This advice on finding computer generated noise is most informative, Daniel. Please allow me to insert a word of caution based on our experiences: We've had several instances in our PC's which use mini-DIN keyboard connectors where hot-plugging the keyboard into the PC has killed the keyboard interface on the motherboard. Hot-plugging is when you make or remove the connection while the PC is on.

On our PC's which use the standard size DIN connector we've not had any problem hot-plugging the keyboards.

de AB7HI, Stephen Lee
slee@u.washington.edu

Date: Fri, 31 Oct 1997 11:23:10 EST
From: n4so@juno.com (charles k brown)
To: qrp-l@Lehigh.EDU
Subject: [30022] W3Gate Web Access via email
Message-ID: <19971030.232123.10975.3.n4so@juno.com>

A service called W3Gate - Web Access via email , will send any Web file, document or .html file to you via email.
The service has been tested and it works, but you need the exact URL and exact document name.
Details: webmail.txt

Ken Brown, N4SO
QTH nr Mobile, AL/ EM50tk
qrp-1 #622
n4so@juno.com

Date: Fri, 31 Oct 1997 08:54:59 -0800 (PST)
From: Frank McCrackin <wb6lma@cdsnet.net>
To: cjcara@classic.msn.com
Cc: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [30023] RE: Copper to Aluminum, HOW?
Message-ID: <199710311654.IAA10181@mail.cdsnet.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

At 07:17 AM 10/31/97 UT, you wrote:

>jim and all...
>McMaster Carr sells an aluminum flux that with a high heat iron or propane
>torch can be used for tinning aluminum with tin/lead solder. You can then
>solder your copper conductor to the tinned area. Since you are at a molecular
>level , there is no oxidation at the joint. Back when the radio and tv
>builders went to aluminum chassis, this is how they made grounding points.
>hope it helps es 73,
>Carlos KB0REI
>

I can't guarantee performance when exposed to the elements outside, but
the following is a simple way to solder copper to aluminum that I have used
for almost 60 years. Aluminum has the property of almost instant surface
oxidation when exposed to air. Oxidized, it will not bond using solder.

A way to beat this problem is to put a drop of light weight oil, like
sewing machine oil, on the aluminum surface where the bond is intended.
Using the tip of a file or other hard steel edge, scrape the aluminum under
the oil drop. The scraping removes the oxidized aluminum surface but the
oil drop shields the aluminum from the oxygen in the air. Then, using a
heavy duty soldering iron and rosin solder, tin the scraped spot -- it
helps to do a bit of rubbing with the iron tip. The oil will burn off in
the process and you will be left with a well tinned place. Be sure to
make the final solder connection with an iron of sufficient heat capability
to assure a good connection in spite of the high heat conductivity of
the aluminum.

Date: Fri, 31 Oct 1997 16:57:04 GMT
From: adams@chuck.dallas.sgi.com (Chuck Adams)
To: qrp-1@lehigh.edu
Subject: [30024] Sunspots
Message-ID: <199710311657.QAA02453@chuck.dallas.sgi.com>

I told you and all you doubting Thomas's should be ashamed. :-)

IV. PENTICTON 10.7 CM FLUX
OBSERVED 30 OCT 088
PREDICTED 31 OCT-02 NOV 090/090/095
90 DAY MEAN 30 OCT 087

Just in time for SS too. See you on 15M.

Might wanna check out 17M today and tomorrow before the contest starts if you are a player.

FYI
Chuck Adams K5FO CP-60 adams@sgi.com
<http://reality.sgi.com/adams/index.html>

Date: Fri, 31 Oct 1997 09:57:08 -0700
From: Andy Fox <foxes@theriver.com>
To: qrp-1@Lehigh.EDU
Subject: [30025] Re: Computer generated noise help wanted.
Message-ID: <345A0DE4.6A08@theriver.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Stephen Lee mentioned that hot-plugging a keyboard with a mini-DIN connector can cause problems. I have also found this to be true with P/S 2 mice - they use the same connector.

I found the "search and destroy" PC generated RFI post to be very informative.

73 de KK7HV

--

Andy Fox
foxes@theriver.com

Date: Fri, 31 Oct 1997 09:01:20 -0800
From: Ed Loranger <we6w@qsl.net>
To: w7ls@brigadoon.com
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [30025] Re: How do I unsubscribe/subscribe?
Message-ID: <345A0EE0.29A2@qsl.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Jim, here's a little command summary I mailed to myself
a long time ago. Comes in handy and I have it saved
in a folder called QRP-L_mailer.

To postpone:

```
email to          |      command in body or message
=====+=====
LISTSERV@LEHIGH.EDU | SET QRP-L MAIL POSTPONE
=====+=====
To restart qrp-l:
LISTSERV@LEHIGH.EDU | SET QRP-L MAIL ACK
```

>>> And to answer your question specifically:

To unsubscribe from qrp-l do the following:

- 1) Make sure you have the correct email name in netscape
that you had when you subscribed.
- 2) send email to the LISTSERV@LEHIGH.EDU, Not the remailer
address.
- 3) No subject in email. In the body of your message
type UNSUBSCRIBE QRP-L

and you are done unsubscribing.

Then to subscribe, make sure you are using your new
email address and subscribe with <mailto:LISTSERV@LEHIGH.EDU>

again and in the body of the message:
subscribe QRP-L Firstname Lastname callsign

That's it!

Hope this helps. 73/Ed Loranger

--

72/73 de we6w qrp es cw ONLY (From non-ham to extra in one day!)
HW-8, OHR-100, Pixie2, Johnson Viking II, Drake TR-3
QRP-L#1068, ARCI#9397, Norcal#2227, ARS#275, AR#112 grid CM88ok
mailto:we6w@qsl.net <http://www.qsl.net/we6w>

Date: Fri, 31 Oct 1997 12:10:23 -0500
From: "David Maliniak" <dmaliniak@penton.com>
To: qrp-l@Lehigh.EDU
Subject: [30025] Source for 2222s
Message-ID: <85256541.005DB383.00@mail.penton.com>
Mime-Version: 1.0
Content-type: text/plain; charset=US-ASCII

Just received the new 1998 catalog from DC Electronics.

PN2222A (T0-92, plastic) are 10 for \$1.
Also has bags of 100 for \$7 and 1000 for \$50.
Metal 2N2222 (30V, 500 mA) goes for \$0.35 each
Metal 2N2222A (40V, 500 mA) goes for \$0.35 each.
Just thought some of you might like to know...

DC Electronics
P.O. Box 3203
Scottsdale, AZ 85271-3203

Toll-free order lines:

(800) 467-7736

(800) 423-0070

(602) 945-7736 for locals.

They take MC, Visa, Discover and Amex. Phone orders carry \$15 minimum.
The usual disclaimer applies. I have been a customer, though, and was happy.

72 David N2SMH
Glen Rock, NJ

Date: Fri, 31 Oct 1997 12:02:50 -0500
From: Ed Tanton <n4xy@bellsouth.net>
To: Arjen.Raateland@vyh.fi
Cc: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [30026] RE: PS Protection using series Power MOSFET
Message-ID: <3.0.1.32.19971031120250.00a96880@mail.atl.bellsouth.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Yes, BUT: You are limited to a thruput of about an amp-maybe an amp and a half. Reason: modern power MOSFETs have protection diodes that have their own drop... said drop becoming high enough to limit the series current to about an amp. Or something like that anyway. Enough to say that there's ~ a 1-1.5A limit no matter what their actual current/power capability.
72/73 ZUT!!!

Ed Tanton N4XY EMAIL: n4xy@bellsouth.net
189 Pioneer Trail
Marietta, GA 30068-3466 TEL: (770)579-3933 V/MBX/FAX

Date: Fri, 31 Oct 1997 11:55:44 -0500
From: Ed Tanton <n4xy@bellsouth.net>
To: JakeCart@ix.netcom.com
Cc: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [30027] Re: How do I protect my HB projects with a diode??
Message-ID: <3.0.1.32.19971031115544.00a8e100@mail.atl.bellsouth.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hi Jake... BEST protection is a SERIES diode-IF you can spare the 1/2 volt drop. You could also use a fuse, followed by a reverse diode: anode to ground. I prefer the series diode since you have to out-PIV it to have problems. Schottky power diodes generally have a lower drop than ordinary silicon diodes, minimizing the loss.
72/73 ZUT!!!

Ed Tanton N4XY EMAIL: n4xy@bellsouth.net
189 Pioneer Trail
Marietta, GA 30068-3466 TEL: (770)579-3933 V/MBX/FAX

Date: Fri, 31 Oct 1997 11:04:46 -0600 (CST)
From: Raventhorne <jelder@ix.netcom.com>
To: NilsBull@aol.com, "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Subject: [30028] Re: Spud guns, nuke-you-lur silos & a slingshot
Message-ID: <2.2.16.19971031100416.2f170e02@popd.ix.netcom.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

At 09:50 AM 9/17/1997 -0400, NilsBull@aol.com wrote:

>Am I like doing something wrong here? Should I have bought the pistol-grip
>cross-bow thingy with the magic, curare-tipped darts? Should I hire some
>Yanumani natives from Brazil (I've got those kinds of connections, see) to
>blow-dart the damn string into the tree. Or, should I just get an
>extendo-ladder and climb up on the roof of the garage and use the slingshot
>to hit the first limb I'm close to so that the sinker will bounce back into
>my forehead?

I've used large lead sinkers, slightly larger than walnuts on fishing line
attached to a cheap reel with my wrist rocket to get my antennas about 50 -
60 feet up into ponderosa pines. Usually only one or two shots. I have no
idea how heavy the weights are, but they are hefty. I've also taken to
spraypainting them fluorescent colors to make locating them on the other
side of the tree easier.

72,

John

@~~~

@ John Elder, Ko6TS

@ PHROG (Pagan Ham Radio Operators' Guild)

@ Box 232, El Segundo, CA 90245

@ Major Strausser has been shot . . . Round up the usual suspects!

Date: Fri, 31 Oct 1997 11:04:44 -0600 (CST)
From: Raventhorne <jelder@ix.netcom.com>
To: ve7ldh@direct.ca, "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>

Subject: [30028] Re: Resonance (was: Re: 10 MHz/UTC Receiver)
Message-ID: <2.2.16.19971031100413.2f171f10@popd.ix.netcom.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

At 10:42 AM 9/10/1997 -0700, laura halliday wrote:

>This is one of those things that a bit more analysis
>can illuminate.

>

>At resonance, the inductive and capacitive reactances are equal
>in magnitude but opposite in sign, and thus cancel.

>

> $X_L = 2 \pi f L$

> $X_C = 1 / (2 \pi f C)$

>

>Setting $X_L = X_C$ produces:

>

> $2 \pi f L = 1 / (2 \pi f C)$

>

>Multiply by $2 \pi f C$ to obtain:

>

> $4 \pi^2 f^2 LC = 1$

>

>Solve for f to obtain the usual formula:

>

> $f = 1 / (2 \pi \sqrt{LC})$

This is all well and good, but given the essentially infinite combinations of L & C , what is the rule of thumb for choosing one or the other?

72,

John

PS Yeah, I know this is old stuff, but I've moved & been real busy with packing/unpacking. I had to delete about 3500 of these messages and am now trying to sort through the remaining 1000 or so.

@~~~

@ John Elder, K06TS

@ PHROG (Pagan Ham Radio Operators' Guild)

@ Box 232, El Segundo, CA 90245

@ Major Strausser has been shot . . . Round up the usual suspects!

Date: Fri, 31 Oct 1997 10:08:56 -0700
From: Andy Fox <foxes@theriver.com>
To: qrp-l@lehigh.edu
Subject: [30029] Capacitor Temperature Ratings
Message-ID: <345A10A8.1621@theriver.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hello,

I just returned from a trip to a couple of electronics supply houses with some capacitors that may or may not be appropriate. I'm going to increase my VFO tuning range on my NorCal 40A. This is C49 on the Wilderness Radio kit.

I went looking for NPO ceramic disc capacitors. These are supposed to be 5% tolerance. What I came back with was:

- a) ceramic disc capacitors with unknown temp coefficient and unknown tolerance. These just look small to me for their rating.
- b) COG monolithic ceramic capacitors with 5% tolerance.
- c) dipped mica capacitors with unknown temp coefficient, 5% tolerance.

I'm interested in suggestions regarding which type of capacitor to use. The world of capacitor specs is pretty much new to me.

Thanks in advance,
73 de KK7HV

--

Andy Fox
foxes@theriver.com

Date: Fri, 31 Oct 1997 12:07:18 -0500
From: Ed Tanton <n4xy@bellsouth.net>
To: slee@u.washington.edu
Cc: QRP-L Reflector <qrp-l@Lehigh.EDU>
Subject: [30030] Re: Computer generated noise help wanted.
Message-ID: <3.0.1.32.19971031120718.00a92da0@mail.atl.bellsouth.net>
Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

Hi Stephen... One or two of the clamp-on ferrites on **EVERY** cable/lead coming in/out of the computer AND the monitor. Start with the mains power cords, then the keyboard (most video cables today have one at the monitor signal lead but not the power lead.) If this first part doesn't do it, start into the other cables (mouse/printer/etc.) If one all around doesn't get it, repeat the first part with a second. I've never needed part three.

At 08:42 AM 10/31/97 -0800, you wrote:

>This advice on finding computer generated noise is most
>informative, Daniel. Please allow me to insert a word of
>caution based on our experiences: We've had several
>instances in our PC's which use mini-DIN keyboard connectors
>where hot-plugging the keyboard into the PC has killed the
>keyboard interface on the motherboard. Hot-plugging is when
>you make or remove the connection while the PC is on.

>

>On our PC's which use the standard size DIN connector we've
>not had any problem hot-plugging the keyboards.

>

>de AB7HI, Stephen Lee
> slee@u.washington.edu

>

>

>

>

72/73 ZUT!!!

Ed Tanton N4XY	EMAIL: n4xy@bellsouth.net
189 Pioneer Trail	
Marietta, GA 30068-3466	TEL: (770)579-3933 V/MBX/FAX

Date: Fri, 31 Oct 1997 12:16:54
From: Steven Weber <kd1jv@moose.ncia.net>
To: qrp-l@lehigh.edu
Subject: [30031] Re: dummy on dummy loads
Message-ID: <3.0.1.16.19971031121654.12076334@mailhost.ncia.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Metal Oxide resistors make good dummy loads. Thier cheap and readaly available. But since 2 watts seem to be the biggist size available, you

need to use several to make any kind of load.

When making a dummy load, you must keep the leads very short. One way to do this is by sandwiching them between two pieces of copper clad board. Make a hole for the RF jack (BNC) in the middle of one board. Stack the two boards and drill holes for the resistor leads around the RF jack hole.

The board with the jack will be the ground, the other will be the "hot" side. The center conductor will run down the middle to the "hot" side. If you use double sided board, be sure to make the connections to the proper side of the board. Push the ends of the resistors tight up against the boards.

Then you can trim the board around the edge of the resistors. What you should end up with is the RF jack with a circle of resistors around it. Try to keep it symmetrical.

A variation would be to mount the RF jack to the lid of a baby food jar. (with the copper clad under the lid) Then you fill the jar with mineral oil, screw on the lid and significantly increase the power rating. Leave a little air gap for expansion.

72,

Steve, KD1JV....In the White Mountains of New Hampshire

"Melt Solder"

Date: Fri, 31 Oct 1997 17:19:42 GMT
From: adams@chuck.dallas.sgi.com (Chuck Adams)
To: rakefet@rakefet.com
Cc: adams@sgi.com, msdooley@aud.alcatel.com, dougfree@onramp.net, rhaynes@csc.com, larry.jones@archives.com, bkmak@airmail.net, cmassey@onramp.net, hbs@crl.com, jspencer@startex.net, michael.hopkins@drig.com, Richard.Kapalczynski@MCI.Com, chefrank@ix.netcom.com, jackg@online.com, ljones@why.net,
Subject: [30031] Re: Saturday NorTex Meeting
Message-ID: <199710311719.RAA02772@chuck.dallas.sgi.com>

Gang,

I called Vic and will pick him up at the hotel first thing in the morning. I have the MIB special issue pen, so afterwards he will remember nothing. We do know why he is here. Those guys in CA will spare no expense in getting information.

We'll have to hide the 2N2222(A) information and make sure we do an inventory before he leaves.

: -)

A big Texas howdy to Vic and I'm sure he'll love the BBQ after the meeting. My treat.

FYI

Chuck Adams K5FO CP-60 adams@sgi.com
<http://reality.sgi.com/adams/index.html>

Date: Sat, 01 Nov 1997 10:20:21 -0700
From: Steve Galchutt <n0tu@webaccess.net>
To: "\"Low Power Amateur Radio Discussion\"> <qrp-l@lehigh.edu>
Subject: [30032] How to contact Wilderness Radio?
Message-ID: <345B64D5.4C23@webaccess.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Anyone know when someone is at Wilderness Radio to answer the phone or what their business hours are?? I've tried several times during the day...No answer or even an answer machine. There's no email adr posted on their webpage?? So, I guess snail mail is my next mode (arugh).

.....Steve > n0tu . .
email:N0TU@webaccess.net
homepage <<http://www.webaccess.net/~S&P>>

Date: Fri, 31 Oct 1997 12:47:57 -0500
From: "Christopher Moore" <christopher.moore@snet.net>
To: <qrp-l@lehigh.edu>
Subject: [30033] SS e-mail filing
Message-ID: <199710311750.MAA18829@midfire5.aetna.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Thanks to all of you who wrote regarding my confusion on how to file SS results using e-mail. I've decided on the following approach.

* Send two separate messages to contest@arrl.org

* The first will have the subject:

W1GM CW SS Summary

In the body of the message, paste in the novss.scr file which you can get from their automated server. Fill in the applicable info and send the message.

* The second message will have the subject

W1GM CW SS Log

In the body paste in your ASCII formatted log. An example log can be found at

<http://www.arrl.org/contests/fileform.html>

Unfortunately, this was not done specifically for SS. For those of you using software contesting packages, the log probably spits out automatically. For the rest of us, a little imagination is required. The last two columns contain the scoring info (multiplier and points). You put a "*" in the multiplier column for the first QSO within a section. The points columns should contain a "2" for each counted QSO.

My goal is 200 QSOs. Maybe we should run a side contest on QRP stns worked.

72 Chris W1GM

Date: Fri, 31 Oct 1997 10:13:53 -0800

From: ki6ds@dpol.k12.ca.us (Hendricks, Doug)

To: qrp-l@Lehigh.EDU

Subject: [30033] NorCal 2222 Design Contest Articles

Message-ID: <3.0.1.32.19971031101353.00711e34@telis.org>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

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This is sometimes misunderstood by editors and publishers of club journals.

If you will look at the fine print in the back of every QRPP, you will see a statement that says, "The articles have been published with the consent of the authors, and no article may be reprinted or reproduced in any form without the expressed written consent of the author. All authors retain all copyrights to their materials, and all articles in this publication are copyrighted. Publishers of other club newsletters may reprint articles as long as they are NOT for profit and not a commercial venture of any kind,

and credit is given to the author and to QRPP."

What that means is that if you are the editor or publisher of a club newsletter and you wish to reprint an article from QRPP, you have my permission as long as you obtain permission from the author and you give credit to the author and to QRPP as the source. That is common courtesy. There is one other caveat. It cannot be used for a "for profit venture". Mentions of QRPP articles and excerpts have been printed in 73 and CQ. In all cases, the writers, Dave Ingram and Mike Bryce had obtained permission from me to run these articles. The permission for "profit" ventures as 73 and CQ are, will be handled on a case by case basis.

If you have written an article and someone has published it, unless they gave you something of value for the rights, and you signed a contract that states you received something of value for the rights to that article, you still own the copyright and rights to that article. You own your own work. That is why QST, 73, and CQ pay for articles. They want the rights.

Now, to answer David Yarnes question. No, NorCal does not get the rights to the winners work. We would like to publish the articles, and feel that it would be a nice gesture to publish it QRPP first, but we have no "right" to that, it is entirely up to the individual designer.

Maybe I need to restate here the motivation for QRPP. Jim Cates and I started NorCal 4 and 1/2 years ago to promote QRP. We wanted to help encourage others to share in a facet of ham radio that we both love and enjoy. Plus, we wanted to learn from others. One of the vehicles that we decided to use was a quarterly journal. Our idea was that there were many QRPers out there with great articles in them, but for some reason or another, had never gotten around to writing the articles. We thought that if we made it as easy as possible, and actively sought out articles we would get them. And we have. But the motivation has been to get the information out to the QRP community and to share information. That has been and always will be the goal of QRPP, to get QRP information out to QRPers. We also want to cooperate (and have at every opportunity) with all other QRP Clubs.

Keep those design juices flowing. 72, Doug, KI6DS/M0BIV

Date: Fri, 31 Oct 1997 10:00:38 -0800
From: Ed Loranger <we6w@qsl.net>
To: gsurrency@juno.com
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [30034] Re: Norcal paddle notes - Some thoughts.....

Message-ID: <345A1CC5.1EB9@qsl.net>
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Great list Gary!

In fact, I had just finished my paddle base and decided it needed a little more rubbing. Big soft blob came up and, although manageable, was not at the quality I expect.

ADD TO LIST: With sandpaper on hard surface, final pass with base in hand will find ANY bump under the sandpaper and RIP a chunk of paint off the nearly finished project!

So, in a QUIET rage, (XYL nearby), I quickly removed any trace of my stupidity from the base with my belt sander.

5 hours of preparation and 7 sheets of 600 grit sandpaper wasted.

The next day Chuck mentioned he re-sanded his too :)

My second (and final, hopefully,) painting experience seems successful! I painted the top of the base with nail polish. It dried VERY hard and easily sanded flat. Now have added a top coat of aluminum containing paint and it dried smooth too! The topcoat appears to adhere very well to the nailpolish and probably won't scratch off. (We'll see...)

The Drake TR-3 generates sufficient heat to BAKE any object placed on top. So the base has been cooked well.

A cotton swab is used with thinner, to remove traces of my stupidity from the top of the Drake :)

I have been informed that "Bogota Blackberry", is not EXTRA nail polish for my project! -- So shouts the XYL!

True, all true.
-Ed Loranger,we6w

--

72/73 de we6w qrp es cw ONLY (From non-ham to extra in one day!)
HW-8,0HR-100, Pixie2, Johnson Viking II, Drake TR-3
QRP-L#1068,ARCI#9397,Norcal#2227,ARS#275,AR#112 grid CM88ok
mailto:we6w@qsl.net <http://www.qsl.net/we6w>

Date: Fri, 31 Oct 1997 18:14:49 +0000
From: Frank G3YCC <g3ycc@gqrpclub.demon.co.uk>
To: gqrp-1@blacksheep.org, qrp-1@Lehigh.EDU
Subject: [30033] Wandering keys, again.
Message-ID: <TNXqxAAZAiW0Ew6Y@gqrpclub.demon.co.uk>
MIME-Version: 1.0

For ages now we have had mail regarding keys which move about on the shack bench and cures for the same. So methinks, it's all our own fault. Why? Because we have got used to the side to side movement of paddle keys. There was no bother when we used the old brass pounders, so I got to consider what we should do about the problem and the obvious answer seems to me to discard the conventional paddle key idea and change to an up and down iambic mode (or go back to pounding brass!). So here is the challenge: A simple and cheap method of CW sending, iambically, using the above idea. What ideas can we come up with? Press switches (I have not found any, yet which are 'quick' enough or positive enough, for me anyway and I don't mean quick speedwise, I mean quick in switch action. I have already had one idea which works OK, but, well I await your input!

Look forward to hearing from you...

--
Frank, G3YCC
QRP web page: <http://www.gqrpclub.demon.co.uk>

Date: Fri, 31 Oct 1997 13:46:31
From: Steven Weber <kd1jv@moose.ncia.net>
To: qrp-1@Lehigh.EDU
Subject: [30034] SMT 2222's
Message-ID: <3.0.1.16.199710311134631.2ec7b740@mailhost.ncia.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Just got a new Mouser catalog today, I noticed you can get the 2222's in surface mount also. (SOT-23, tiny little buggers)

Although no good for this project, I see mouser now carries NEC RF transistors and MMIC's. Now those might be handy to have around...

Okay, enough from me already. I need to get some work done around here to pay the rent!

72,
Steve, KD1JV....In the White Mountains of New Hampshire

"Melt Solder"

Date: Fri, 31 Oct 1997 14:04:31 -0500
From: "W. D. Lindsey" <70511.3041@compuserve.com>
To: QRP-L Discussion Group <QRP-L@Lehigh.EDU>
Cc: "W.D. (Doc) Lindsey/K0EVZ" <70511.3041@compuserve.com>
Subject: [30033] Help:Lost E-Mail re TS930
Message-ID: <199710311406_MC2-264F-962E@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

Gang:

To whoever sent me a message about Burghardt's, etc., please send it again.
Must have accidentally hit the delete switch too quick... because the
message is not there. I remember that your handle is "Bill" and you have
a 1X2 call beginning with "W". Sorry for the BW, everyone.

72/73,

--Doc/K0EVZ qrp-l 861 norcal 2050 cqz 414 ars 311 mn-qrp 19
nj-qrp 69 ak/qrp 73 arci 9398 arrl was 48/409 dxcc 55/42 <><
FOX total 10/30/97 = 10 of 11 & 7 of 8 N/T+ FOXes

Icom 751a OMNI V Sierra Argo 515 Norcal 40a SW-40 49er
Mercury Paddles Emtech ZM-1 MFJ 259 MFJ 941D GAP Titan DX TNT/2
Windom SLV/W6MMA G5RV Autek QF-1 RS DSP-40

"Things should be as simple as possible but no simpler"--A. Einstein

Date: Fri, 31 Oct 1997 11:21:09 -0800
From: Monte Stark <ku7y@sage.dri.edu>
To: adams@chuck.dallas.sgi.com
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [30033] Re: Sunspots
Message-ID: <345A2FA5.AA2@sage.dri.edu>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hi All,

I just worked CY0DX on 21.031 at 1905z. Didn't even use the right yagi.... just cut the power and used the 40m. He was just begging for contacts!

cu all tomorrow/Sunday.....

It's OK if you can't find Chuck, just be sure to find me!! :-)

--

73, Ron

NRA Life-----Ex W6JX0, DL4RF, N7CRV-----SOWP #5545-M
QRP QRCI #8829----NorCal #330----QRP-L #17-----ARS #49
AR QRP #150-----DM09cg-----New Washoe City, NV

Date: Fri, 31 Oct 1997 11:52:24 -0800
From: Monte Stark <ku7y@sage.dri.edu>
To: ki6ds@dpol.k12.ca.us
Cc: Low Power Amateur Radio Discussion <qrp-l@Lehigh.EDU>
Subject: [30033] Re: NorCal 2222 Design Contest Articles
Message-ID: <345A36F8.693D@sage.dri.edu>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hendricks, Doug wrote:

>
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> and credit is given to the author and to QRPP."

The QRP ARCI Quarterly has what amounts to the same policy. On the

inside back

cover we say... "Copyright of materials published in the QRP Quarterly remains with the author. Although the author retains the right to reuse the material, the QRP Quarterly requests that reprints of the material in other publications acknowledge first publication in the QRP Quarterly."

As an author, it's your work and you own it unless someone gives you something of value for it!

A good example of these policies in action is on page 3 of the Oct issue of the QRP Quarterly. When we ran an article in the July issue, I failed to mention that it had already been published in the QRPP. Thus the notice in the next issue.

For all you authors out there, (and we all love you), please tell us if a submission was published somewhere else. Where and when! We just can't remember what was published where and when! (Some of us even have a hard time remembering what we had in our own magazines!)

cul,

--

73, Ron

NRA Life-----Ex W6JX0, DL4RF, N7CRV-----SOWP #5545-M
QRP QRCI #8829----NorCal #330----QRP-L #17-----ARS #49
AR QRP #150-----DM09cg-----New Washoe City, NV

Date: Fri, 31 Oct 1997 13:01:38 -0600
From: "Phil, K6LS" <k6ls@amsat.org>
To: qrp-l@Lehigh.EDU
Subject: [30034] re: 2222 contest
Message-ID: <345A2B12.D3337052@amsat.org>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Regarding the NorCal 2222 design contest....

The rules have been published, and I believe the intent is pure, with its 'limitations'.

For those aspiring designers- go for it, give it a try, but if you have to use other components, go ahead! So, you can't submit it for the contest- no big

deal,
but I bet you learned something from the process of designing your own
rig!
And, just because you didn't use JUST 2N2222's, doesn't mean that no
one
would like to hear about it. I bet that we could learn from your
design and that
you will also learn from it by the open forum that is QRP-L.

Contest or no, go forth and design! (then share with the qrp world!)

--
72/73 de Phil, K6LS

k6ls@qsl.net <or> k6ls@amsat.org
<http://www.qsl.net/k6ls>

DM79or , Arapahoe County, Colorado ITU zone 7, CQ zone
4

QRP-L #612 NorCal #824 CQC #471 ARCI #8866

Date: Fri, 31 Oct 1997 15:07:36 -0500 (EST)
From: "Scott Rosenfeld [NF3I]" <ham@w3eax.umd.edu>
To: qrp-l <qrp-l@Lehigh.EDU>
Subject: [30033] QRP Dinner Attended!
Message-ID: <Pine.LNX.3.95.971030092219.29230B-1000000@w3eax.umd.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Many thanks to Adam, N2BRT, for being the impetus for dinner.

So the Olive Garden was overwhelmed with the presence of QRPers - 11 of
us, and noisy ones, at that.

Many people I expected to come couldn't make it.

Bruce, Danny, Craig, Bill, Chris, Paul, Tom - we missed you!

However, many people I wasn't aware were coming, did!

To have so many people NOT show up and still have 11 was pretty inspiring.

N2BRT - Adam, visiting from Iowa

KA3EAJ - Dave, who's surfaced of late

KE3HE - Ben, a latent local QRPer and fellow member of W3EAX

KD3FG - Jon, a long time QRPer at a young age

N3HXV - Boun, a true homebrewer

WA4KAC - Walt, another one of the local QRPers

WA8MCQ - Mike, need I explain him?

AB3A - Jake, who talked about electronics until his dinner was cold

WB3HUP - Mike, the only guy I know whose mobile antenna is BIGGER than mine

N3SLR - Rich, who probably passed his exam!

All in all, a great time for all. Lots of interesting discussion, and lots of good food.

Until next time...and until Dayton...

If you're gpoing thru the DC area, let us know!

* Scott Rosenfeld NF3I Burtonsville, MD FM19mc QRV 80-10/6/2/440 *
* 6m 80 grids on 8w * DXCC WAS WAC * QRP-L #147 * QRP ARCI #9054 *
* Charter member, Maryland Milliwatters * W3-VK on 3w mobile CW *
*** 301-549-1022 h / 301-982-1015 w ** Life is one big hamfest ***

Date: Fri, 31 Oct 1997 15:07:41 EST

From: PaulKB8N <PaulKB8N@aol.com>

To: PaulKB8N@aol.com, tentec@contesting.com, qrp-1@Lehigh.EDU

Subject: [30034] [TenTec] For Sale - Mint 962, 700C

Message-ID: <fca6ffe1.345a3a61@aol.com>

Content-type: text/plain; charset=US-ASCII

Content-transfer-encoding: 7bit

In a message dated 97-10-28 08:58:56 EST, PaulKB8N@aol.com writes:
Gang,

I have for sale now at reduced prices:

Mint Ten-Tec 962 power supply for sale, \$135 plus shipping.

Ten-Tec Model 700C Handheld Microphone, \$20.

Paul, KB8N

Date: Fri, 31 Oct 1997 10:37:00 -0600
From: Bob Tellefsen-CNSE97 <Bob_Tellefsen-CNSE97@email.mot.com>
To: ham@w3eax.umd.edu, qrp-1@Lehigh.EDU
Subject: [30035] Auttek RF-1
Message-ID: <M2177970.021.xnkyt.1.971031203003Z.CC-MAIL*/OU=LMPCC4/OU=ILBB/
PRMD=MOT/ADMD=MOT/C=US/@MHS>

Hi, Scott:

Like many here, I have the RF-1 and use it constantly.

When I first got it I used it for the C and L measuring capability.

Later on got to using it for antenna work. I had been using the Palomar noise bridge and my Sony portable SW receiver for a tunable rf detector.

I also use it to tweak up my antenna tuners when working with balky antennas. Don't want to blow a final if I don't have to.

The RF-1 is great for antenna work. Extremely portable, particularly if you climb a tower to access a feedpoint. I remember using an old HyGain trap tribander back in Iowa. Had the tri-axial gamma match that had to be tuned in place. I used to carry my swr bridge up to the feedpoint, and key the rig with a long extension cord on the key line. Then adjust, and measure again. Boy, I sure could have used the RF-1 then!.

Perhaps the best aspect of the RF-1 for antenna work is that it not only shows swr, but also tells you the impedance. This way, you know more than just swr=2.0. You know if it is at 100 ohms or 25 ohms.

I have only one complaint with the little box. The power on/off switch is a pushbutton that is easily bumped. This also makes it difficult to carry in a pocket without turning it on somewhere along the way. I find that if I am traveling with it, it is better to just remove the battery. Then bumping the RF-1 won't accidentally turn it on and run the battery down.

Standard disclaimer:

I have no involvement with Autek other than a satisfied user.

72, Bob N6WG and 01' Kenwood

Date: Sat, 01 Nov 1997 13:07:26 -0700
From: Steve Galchutt <n0tu@webaccess.net>
To: "\"Low Power Amateur Radio Discussion\"" <qrp-l@lehigh.edu>
Subject: [30033] Re: Wilderness Radio
Message-ID: <345B8BFE.39AF@webaccess.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I got thru to QRPBob no problem. He was very helpful...tks gang for info. I had the right # but just missed him my first couple of trys. I guess I need to be more patience. I get so excite when it comes to a new kit. (new to me that is)

Steve/n0tu

.....Steve > n0tu . .
email:N0TU@webaccess.net
homepage <<http://www.webaccess.net/~S&P>>

Date: Fri, 31 Oct 1997 14:42:48 -0600 (CST)
From: Bill Howell <bhowell@mail.utexas.edu>
To: qrp-l@lehigh.edu
Subject: [30033] N/T Fox W2MBY....almost
Message-ID: <199710312042.0AA00975@mail.utexas.edu>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Heard your sigs near the end of the two hours.....
then some kinda' massive QRN came on...sounded like
ocean waves of SSHHsshhSSHhsshh noise. Funny, the noise
was not present on the lower end of the Novice band.
Had to crank in all my anti-noise knobs (all two of them).

By then the time had run out! Guess I shouldn't have taken that one hour break for Star Trek.

72,

Bill Howell
University of Texas at Austin
Performing Arts Center
Electronic Maintenance
N5ALO QRP-L #415

Date: Fri, 31 Oct 1997 16:07:44 -0500 (EST)
From: n4js@amsat.org
To: qrp-l@lehigh.edu
Subject: [30034] Update on ARK4
Message-ID: <XFMail.971031161201.n4js@amsat.org>
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 8bit
MIME-Version: 1.0

First of all, thanks to all who replied. I am still working on it.

1. All DC voltages are nominal in the transmitter.
2. There is RF drive present at the base of Q5 (Final).
3. At output of Q5, when keyed, there is a momentary RF voltage, which then drops to 0. No output at all.
4. The relay is keying. The momentary output appears at the RF output jack.
5. No obviously burned resistors. All test OK.

I had replaced Q5. No difference. Maybe I better replace it again?

This is a strange one.

Sent at 16:12:01 on 31-Oct-97

John L. Sielke	n4js@amsat.org	n4js@pobox.com
n4js@qsl.net	NJ Grid:FM29LN	
http://www.qsl.net/n4js NJ-QRP #57 QRP-L #884		
QRP-ARCI CQC #443 CQrp #50 AKQrp ARQrp		
NE-QRP #507	G-QRP #9544	NorCal #1989 QCWA FISTS #2781 ARS #243

Date: Fri, 31 Oct 1997 17:53:37 -0500 (EST)
From: Chris Cartwright <ccart@dns.vidtel.com>
To: QRP Reflector <qrp-1@lehigh.edu>
Subject: [30034] FOX: STATE STANDINGS 1997/98 FOXHUNT
Message-ID: <Pine.LNX.3.93.971031172928.1272A-1000000@dns.vidtel.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Well folks, here they are! Some of the results are "unofficial" meaning that I got them from the list instead of K5F0. If there are errors, typos etc, please let me know via email and I'll get them corrected. I will only post this after every "X" hunts. X being time to get it compiled when I'm not working :)

Top five, CA, TX, AZ, CO, & MN/OK (CA is kickin' a**)

Only TX and MN have caught every fox.

We have 52 "states" (50 + DC & GULF of MEX) and four Canadian (provinces/territories?)

14 states are "foxless" so far.

58.36 Q's per fox. 11 foxes and 642 Q's

Other stats as I get time. Also, I have numbers for hams/state so *we* can take CA down a peg a little later on:) I hope :^0

[NOTE: I spent a few hours trying to write something to do this automagically and ended up tabulating by hand, 'puters ain't all they're cracked up to be, so let me know where I screwed up]

1997/98 FOXHUNT STATE SCORES

	1	2	3	4	5	6	7	8	9	10	11		
							*		*	*	*		(*=unofficial results) (#= top 5 states)
	K	A	N	N	W	W	N	A	V	N	N	T	R
F	5	E	8	R	7	5	Q	B	E	0	0	O	A
O	0	9	V	3	Q	F	7	7	7	T	U	T	N
X	I	K	A	Z	Q	N	K	T	C	F	R	A	K
			R		Q			K	Q	I		L	

K

AK	-	-	-	-	1	-	-	-	-	-	-	1	21
AL	2	2	-	2	-	1	-	2	1	-	1	11	11
AR	-	1	-	2	3	-	1	-	-	-	-	7	15
AZ	11	4	-	3	8	7	8	6	7	2	7	63	3#
CA	21	2	-	4	8	19	18	19	16	12	12	131	1#
CO	4	2	-	4	-	4	3	6	3	-	2	28	4#
CT	-	4	3	1	2	1	-	-	-	-	1	12	10
FL	-	2	-	1	-	-	-	-	-	-	-	3	19
GA	1	1	-	1	-	1	-	1	-	-	1	6	16
IA	-	1	1	-	2	1	-	1	1	-	-	7	15
ID	1	-	-	-	1	1	2	1	3	1	-	10	12
IL	-	-	-	3	2	3	1	1	1	-	3	14	9
IN	-	-	1	2	-	3	-	-	-	-	-	6	16
KY	1	1	-	-	1	1	-	-	-	1	1	6	16
MA	-	-	2	-	-	-	-	-	1	-	-	3	19
MD	-	3	1	-	-	2	-	-	-	-	2	8	14
MI	-	-	-	-	-	4	2	-	1	1	1	9	13
MN	1	3	2	3	2	5	1	1	2	1	3	24	5#
MO	2	3	2	3	3	-	1	1	2	3	1	21	6
MT	1	1	-	-	1	1	1	-	-	-	-	5	17
NC	2	2	2	1	-	2	3	2	1	-	2	17	8
ND	-	-	-	1	-	-	-	-	-	-	-	1	21
NJ	-	2	1	-	-	1	-	-	-	-	-	4	18
NM	1	2	-	1	-	2	2	4	3	2	2	19	7
NV	2	1	-	-	1	2	2	1	1	2	-	12	10
NY	-	7	4	-	1	1	-	-	-	-	4	17	8
OH	-	-	-	-	-	3	-	-	1	-	1	5	17
OK	4	3	2	1	1	-	4	2	1	3	3	24	5#
OR	1	-	-	-	2	-	-	-	1	-	1	5	17
PA	-	2	-	-	-	1	-	-	-	-	2	5	17
SC	-	1	-	1	-	1	1	-	-	-	1	5	17
TN	1	1	-	1	-	-	-	-	-	-	-	3	19
TX	9	9	2	12	14	2	9	7	7	4	9	84	2#
UT	2	-	-	-	1	2	2	4	1	-	2	14	9
VA	-	3	1	-	-	1	1	1	-	1	1	9	13
WA	-	-	-	-	1	-	1	-	-	1	2	5	17
WI	-	-	-	-	2	4	-	-	-	-	-	6	16
GULF	-	-	-	-	1	1	1	-	-	-	-	3	19
AB	-	-	-	-	-	-	-	1	1	-	-	2	20
BC	1	-	-	-	1	1	-	-	-	-	1	4	18
ON	-	-	1	-	-	2	-	-	-	1	3	7	15
SK	-	1	-	-	-	1	1	-	1	1	1	6	16
Q's	69	65	25	47	65	81	65	63	56	36	70	642	--

STATES NOT LISTED: DC,DE,HI,KS,LA,ME,MS,NE,NH,RI,SD,VT,WV,WY

```
-- Chris Cartwright,   Technical Engineer |      ccart@vidtel.com      --  
-- N3XRV      ARRL-VE   QRP WAS 27/10(w/c) |      ccart@erols.com      --  
-- QRP-L #655 NORCAL #1891 QRP-ARCI #????? | http://dns.vidtel.com/~ccart --
```

Date: Fri, 31 Oct 1997 21:51:17 GMT
From: adams@chuck.dallas.sgi.com (Chuck Adams)
To: qrp-l@Lehigh.EDU
Subject: [30035] N1PWU's Offer
Message-ID: <199710312151.VAA08753@chuck.dallas.sgi.com>

Gang,

Thanks to Bob for the support of the contest and this group with his offer of 22 2N2222's for a buck.

Without postage \$1/22 is about a nickel a piece. But with his \$0.32 costs of postage, \$0.68/22 is 3 cents each that he is getting.

So, to show your support, how about you include a mailing label and an SASE. We don't want him to lose money on this deal and it'll help him and us. Not to mention all that writing of labels he or his help would have to do.

Offered for your consideration at no extra charge.

FYI

Let's see, contacts for a buck and now 2N2222's for a buck. This sounds like the start of an Internet Everything for a \$1 Group. :-)

OH, how about we rename this contest the 2N2 contest? I got the following off the Internet a while ago.

-----NEWS ALERT-----

.....RepairTown, AK, USofA

*****Keyboard Failure Alert*****

As reported by Tony 'Two Toes' Thomason.

In the last 2 days a sudden influx of calls into the keyboard hotline at Keyboards-R-Us (tm) have caused panic throughout the computer repair business. Major keyboard manufacturers and their Research and Design Centers worldwide have gone at a 7-24 alert (7 days a week with 24 hour shifts) in order to rapidly bring closure to the problem that has suddenly occurred worldwide.

It was noted by Dwight Dweeb, Head of Customer Support at Keyboards-R-Us, that a sudden influx of calls on the hotline had to do with failure of the '2' key on PC and WorkStation keyboards. First observations tend to indicate that the customer using the keyboard was excited about some contest that involved a part and the quantity of same that had the numeral 2 used a significant number of times. At the present time 2,222 calls have been logged at their hotline number (222) 222-2222 ext 2222 operator 22. "We have never seen anything like it before in the history of the keyboard and typewriter industry where one key was the major failure point in such a short period of time", said Dwight in a major news conference called on the steps of the company's two story complex covering two city blocks and located two miles from the Alaskan pipeline.

Statistical data is now being accumulated at all call centers internationally to determine if this problem is spread industry wide or just a subset of the millions of computer keyboards used for Internet traffic.

Several US Government Agencies have begun a statistical analysis to determine if Internet traffic from certain groups on the Internet have a significant correlation to the incoming data and dual system of checking has been set up to double check the data.

CNN and other major TV networks have put their top news crews on double alert status in case a central location is rapidly determined. Two major tabloids have also taken interest in this news item. Stay tuned for further announcements.

Chuck Adams K5FO CP-60 adams@sgi.com
<http://reality.sgi.com/adams/index.html>

Date: Fri, 31 Oct 1997 16:52:43 -0500 (EST)
From: N9DD@aol.com
To: LAGESON@worldnet.att.net
Cc: qrp-1@lehigh.edu
Subject: [30036] Re: FOX: N0UR Fox log
Message-ID: <971031165104_-1307645183@emout07.mail.aol.com>

In a message dated 97-10-31 04:34:56 EST, you write:

<< 8 0209 N9DD 559 IL JIM 32 >>

Hi Jim

As awful as the QRM got just as you came back to me, I am amazed that I got in your log at all. You have the report and my number correct, but not the State and name. This line should read:

8 0209 N9DD 559 IN TOM 32

Thanks and 73!

Tom N9DD
South Bend, IN

Date: Fri, 31 Oct 1997 14:18:45 -0800
From: ki6ds@dpol.k12.ca.us (Hendricks, Doug)
To: qrp-1@lehigh.edu
Subject: [30037] Looking for 2222 Moses
Message-ID: <3.0.1.32.19971031141845.00706d68@telis.org>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

There is a lot of excitement about the 2222 contest as we can see by reading the list. I am sure that the designers on this list are licking their chops, making a list, checking it twice, drawing and redrawing schematics, but what about the rest of us? I need a guru, someone to step forward and lead me out of the desert.

I would like a volunteer to do the following for the unwashed non engineer

types like me. Help us design a radio for the contest. Lets make it a 40 meter CW transceiver with a VFO, superhet receiver and put out a couple of watts or so. That way when we get it built, we can try and work the fox with it.

Lets build in blocks, checking and verifying each block as we go, explain what it does, and how it works. Give us references to go to for schematics. Maybe there will be more than one way to design the VFO or audio amp. Point us in the right direction. In fact, it would even be neat to scan in the schematics and have someone like Bob Hightower put them on his web page. Do we have a volunteer to come back with a block diagram for Monday? Can we do this one block a week? No circuit boards, use veroboard or ugly construction.

72, Doug, KI6DS/M0BIV

Date: Fri, 31 Oct 1997 15:14:54 -0700 (MST)
From: Paul Harden <pharden@aoc.nrao.edu>
To: gqrp-l@blacksheep.org, qrp-l@Lehigh.EDU
Subject: [30038] LIST: 2N2222 Equivalents
Message-ID: <199710312214.PAA28435@zia.aoc.NRAO.EDU>

CROSS-REFERENCES TO 2N2222/NTE123 NPN TRANSISTORS

For the NorCal 2N2222 building contest, you are allowed to use only 2N2222's or the NTE (ECG) Equivalents. Listed below are SOME of the transistors that are NTE123/2N2222 equivalent.

REF: NTE Semiconductor Data Book, 6th Edition

*** astericks indicate the primary replacement, or preferred component.

Older NPN's		Newer NPN's	Motorola MPS
-----		-----	-----
2N117-2N120	2N2219	*2N3904 ****	MPS706-708
2N472-2N480	*2N2222 ****	2N3946-2N3947	MPS2218-2222
2N542-2N543	2N2790-2N2791	2N4046	*MPS2222 ****
2N702-2N706	2N2845-2N2848	2N4138-4141	MPS3704-3721
2N711-2N717	2N2883-2N2884	2N4400	MPS3900-3904
2N742-2N778	2N2958-2N2961	*2N4401 ****	*MPS3904 ****
2N839-2N844	2N3009	2N4418-2N4422	MPS6512-6515
2N914-2N916	2N3011	2N5183-2N5187	*MPS6520 ****
2N929-2N930	2N3128-2N3130	2N5209-5210	*MPS6521 ****
2N1077	2N3241-2N3242	2N5219-5220	MPS6544-6545

2N1149-2N1153	2N3299	2N5223-2N5225	MPS9611-9623
2N1276-2N1279	2N3301		MPS9626-9634
2N1587-2N1588	2N3508-2N3512		MPS9700
2N1944-2N1952	2N3688-2N3694		MPS-A7
2N1962-2N1965	2N3903		MPS-A10
2N-6L6			MPS-A20
2N-12AU7			MPS-H05

European Types (Motorola)		Panasonic
BC107-BC115	BF183	PN100-107
BC107 (T0-18)	BF189	PN929-930
*BC108 ****	BF224-225	PN2218-2222
BC109 (T0-18)	BF248	*PN2222 ****
BC118	BF250	PN3053
BC125	BF291	*PN3904 ****
BC129-135	BF293	PN4013
BC182	BF321	PN5127-5129
BC237	BF440-441	PN5131-5137
BC337 (.8A)	BF596	PN5172
BC546-550	*BFR11 ****	
BC550 (2dB NF)	BFR26	

GL es 7222, Paul NA5N

Date: Fri, 31 Oct 1997 14:24:22 -0800
 From: "Michael A. Gipe" <mgipe@reliablemeters.com>
 To: "QRP-L list server" <qrp-l@Lehigh.EDU>
 Subject: [30039] Fox alert: next week's fox
 Message-ID: <199710312224.QAA24877@multi13.netcomi.com>
 MIME-Version: 1.0
 Content-Type: text/plain; charset=ISO-8859-1
 Content-Transfer-Encoding: 7bit

Fox alert! Fox alert! Fox alert! Fox alert! Fox alert! Fox alert!

Mark your calendar for the fox:

K1MG on November 7 at 0200 to 0400 UTC

In the USA, that's next THURSDAY, November 6 at

6:00 to 8:00 Pacific
7:00 to 9:00 Mountain
8:00 to 10:00 Central
9:00.00 to 11:00.00 Eastern
sometime in the afternoon Alaska
when we get around to it Hawaii

(Boy, I hope I got that right)

Let's see how big a pileup we can make with QRP!

Since this closely follows Sweepstakes, I will set my code speed a little higher than most foxes. Feel free to send at whatever speed you are comfortable with. Try to copy my report at full speed, even if you need to hear it a few times to do so. Of course, if you ask me to QRS, I will be happy to do so. I will probably also slow it down on occasion just so no one is completely overwhelmed (other than me).

If necessary (I hope), I will also call for split operation, meaning that I will ask you to reply to me up 1 kHz from my frequency. Don't worry, I will also be listening for your calls on my own frequency, and I won't penalize anyone who does so. I do want to spread out the hunters a bit, to make sure everyone can hear me and know who I am talking to.

My order for 46 more pounds of aluminum will not have arrived by Thursday, so I will be forced to rely on a less substantial combination of aluminum and copper for the antennas. However, I will be running with a full complement of filters, so even if you can just hear me, I'll do my best to hear you.

This is my first turn ever in the fox barrel, and I am excited and ready to jump in with both feet, so hit me with everything you've got. I'd like everyone on QRP-L to be there.

Mike K1MG

Date: Fri, 31 Oct 1997 22:26:02 +0000
From: Sandy W5TVW <ebjr@worldnet.att.net>
To: Bob_Tellefsen-CNSE97@email.mot.com, qrp-l@Lehigh.EDU
Subject: [30040] Re: Autek RF-1
Message-ID: <19971031222601.AAA5733@LOCALNAME>
Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

At 04:37 PM 10/31/97 +0000, you wrote:

> Hi, Scott:
>
> Like many here, I have the RF-1 and use it constantly.
>
> When I first got it I used it for the C and L measuring capability.
>
> Later on got to using it for antenna work. I had been using the
> Palomar noise bridge and my Sony portable SW receiver for a tunable rf
> detector.
>
> I also use it to tweak up my antenna tuners when working with balky
> antennas. Don't want to blow a final if I don't have to.
>
> The RF-1 is great for antenna work. Extremely portable, particularly
-----snip-----

I have an RF-1 and love it! Great instrument. It does have ONE GLARING
FAULT! The coarse tuning capacitor is a crappy Japanese/Tiawanese
variable and it gets very critical and touchy to set! That and it needs a
little cylindrical "guard" around the "power" push-button to keep it
from getting accidentally pressed. (In other words like a "panic" or "Arm"
aircraft button). The RF-1 is a 9 volt battery eater and batteries aren't
cheap anymore like they used to be!
The "generator" in it is very accurate frequency wise! Makes a nice "marker"
generator for calibrating analog receiver dials!

73,

E. V. Sandy Blaize, W5TVW

"Boat Anchors collected, restored, repaired, traded and used!"

417 Ridgewood Drive

Metairie, LA., 70001

860 Hartley 'ECO' under construction**

*** Looking for a TRC-10 *****

Date: Fri, 31 Oct 1997 12:28:30 EST

From: dhlauten@juno.com (David H. Lauten)

To: qrp-l@lehigh.edu

Subject: [30041] Re: FOX N/T Monday CORRECTION

Message-ID: <19971031.101057.7687.0.DHLAUTEN@juno.com>

Here are the results of the October 28 0200-0400 UTC N/T Foxhunt:

Time	Call	RST (His/Mine)	Name	State	NR/Power
Frequency: 7.1174 Mhz.					
0217	KC2CFZ	559/559	(John)	NJ	
0224	WB9HFK	559/559	Mark	(IL)	
0229	AE4GX	559/559	Sam	GA	4(?)356
0232	K0EVZ	559/569	(Wilford	MN)	
0235	N2MNN	559/559	(Steve)	NJ	
0251	N1QQV	559/559	Ken	CT	
0258	N4S0	559/579	(Charles	AL)	

Frequency: 7.1122

0319	K4PYM	569/569	(George)	SC	1297
------	-------	---------	----------	----	------

Frequency: 7.1226

0336	N3YSI	559/559	Paul	(PA)	
0359	KF2PH	539/559	Nick	NY	
----- correction -----					

NOTES:

1. Thanks for all who were listening and trying to reach me.
2. While the N/T band conditions were not great, they were much better than Oct 7.
3. I was using a HW-9 at 5 watts with a 33 ft ground mounted vertical with 24 radials.
4. The propagation generally favored N-S while on Oct 7 it was more E-W.
5. The information in brackets was provided from the QRZ Database.
6. I had a GREAT time and look forward to being the fox Nov 4, 0200-0400 UTC

72 de David Lauten, KF4HAW
Conway, SC (near Myrtle Beach)

----- End forwarded message -----

Date: Fri, 31 Oct 1997 16:07:43 -0700 (MST)
 From: Paul Harden <pharden@aoc.nrao.edu>
 To: qrp-1@Lehigh.EDU
 Cc: Solar@zia.aoc.NRAO.EDU
 Message-ID: <Pine.SOL.3.91.971031160647.2215B-1000000@zia>
 MIME-Version: 1.0
 Content-Type: TEXT/PLAIN; charset=US-ASCII

SOLAR ACTIVITY QUICK-LOOK ***

Updated: 31 OCT 1997
 10cm flux average: 83 On 31OCT = 91!!
 3-5 day forecast: 90-95

SOLAR

FLUX	JUN 97	JUL 97	AUG 97	SEP 97	OCT 97
130					
120				*	
				*	
110				***	

100				****	

90				*****	*
				*****	** *
80			**	*****	*
			*****	*****	
70			*****	*****	

Most of October, the flux has been in the mid- to low-80's.
 On October 31, it jumped to 91, with forecasted levels in
 the mid-90's ... perhaps to hit 100 (again) next week.
 This all points towards favorable conditions on the bands,
 including DX paths on 15M. Since this increased flux was NOT
 due to solar disturbances, no geomagnetic storms are forecasted.

Date: Fri, 31 Oct 1997 18:28:32 +0000
 From: Leon Heller <leon@lfheller.demon.co.uk>

To: jelder@ix.netcom.com
Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>
Subject: [30042] Re: Resonance (was: Re: 10 MHz/UTC Receiver)
Message-ID: <dXzTjNAQNiW0Ewbj@lfheller.demon.co.uk>
MIME-Version: 1.0

In message <2.2.16.19971031100413.2f171f10@popd.ix.netcom.com>, Ravensthorpe <jelder@ix.netcom.com> writes
>At 10:42 AM 9/10/1997 -0700, laura halliday wrote:
>>This is one of those things that a bit more analysis
>>can illuminate.
>>
>>At resonance, the inductive and capacitive reactances are equal
>>in magnitude but opposite in sign, and thus cancel.
>>
>> $X_L = 2 \pi f L$
>> $X_C = 1 / (2 \pi f C)$
>>
>>Setting $X_L = X_C$ produces:
>>
>> $2 \pi f L = 1 / (2 \pi f C)$
>>
>>Multiply by $2 \pi f C$ to obtain:
>>
>> $4 \pi^2 f^2 LC = 1$
>>
>>Solve for f to obtain the usual formula:
>>
>> $f = 1 / (2 \pi \sqrt{LC})$
>
>This is all well and good, but given the essentially infinite combinations
>of L & C , what is the rule of thumb for choosing one or the other?
>
>72,

The one I use is $C \text{ (pF)} = \text{the wavelength in metres (approx.)}$.

Leon

--

Leon Heller: leon@lfheller.demon.co.uk <http://www.lfheller.demon.co.uk>
Amateur Radio Callsign G1HSM Tel: +44 (0) 118 947 1424
See <http://www.lfheller.demon.co.uk/rcm.htm> for details of a
low-cost reconfigurable computing module using the XC6216 FPGA

Date: Fri, 31 Oct 1997 15:33:34 -0800
From: Robert Bayha <rbayha@ix.netcom.com>
To: ki6ds@dpol.k12.ca.us
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [30043] Re: Looking for 2222 Moses
Message-ID: <345A6ACD.6DE1C6F7@ix.netcom.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hendricks, Doug wrote:

> There is a lot of excitement about the 2222 contest as we can
> see by
> reading the list. I am sure that the designers on this list are
> licking
> their chops, making a list, checking it twice, drawing and redrawing
> schematics, but what about the rest of us? I need a guru, someone to
> step
> forward and lead me out of the desert.
>
> I would like a volunteer to do the following for the unwashed
> non engineer
> types like me. Help us design a radio for the contest. Lets make it
> a 40
> meter CW transceiver with a VFO, superhet receiver and put out a
> couple of
> watts or so. That way when we get it built, we can try and work the
> fox
> with it.
> Lets build in blocks, checking and verifying each block as we
> go, explain
> what it does, and how it works. Give us references to go to for
> schematics. Maybe there will be more than one way to design the VFO
> or
> audio amp. Point us in the right direction. In fact, it would even
> be
> neat to scan in the schematics and have someone like Bob Hightower put
> them
> on his web page. Do we have a volunteer to come back with a block
> diagram
> for Monday? Can we do this one block a week? No circuit boards, use
> veroboard or ugly construction.
> 72, Doug, KI6DS/M0BIV

Doug... all I can say is THANKS for not forgetting us folks that
couldn't design a radio for the 2222 contest if our life depended upon
it!!! I would be a very active participant if a 'Moses' appears to lead

us ignorant ones to the land of enlightenment! You just don't know how much something like this would be appreciated. Maybe then, I would feel free to ask all those 'dumb' questions that I put off asking for the fear of feeling foolish among such a knowledgeable crowd. Geeeeeazz... the opportunity to learn... what a gift.

73 Bob, KF6HXS

Date: Fri, 31 Oct 1997 15:43:00 -0600
From: Bob Tellefsen-CNSE97 <Bob_Tellefsen-CNSE97@email.mot.com>
To: ae4ic@nr.infi.net, qrp-1@lehigh.edu
Subject: [30044] Re: Little Emmy
Message-ID: <M2178864.019.xxafs.1.971031235921Z.CC-MAIL*/OU=LMPCC4/OU=ILBB/PRMD=MOT/ADMD=MOT/C=US/@MHS>

Hello, Bob (AE4IC). Sorry to be so long replying to your concerns about your young lady. I don't think you have to worry about Little Emmy and Ol' Kenwood.

He's a very dignified old hound, with a good idea of proper behavior in mixed company. Hasn't wet a trouser leg in years.

If she thinks she would like to meet him, I suggest an on-the-air contact, out in public view. This would protect both their reputations and ease your mind. He's a bit old-fashioned (only semi-QSK), but a good conversationalist. True, he's an experienced old dog, but he's very aware of the concerns of the young (and their elders).

It will probably have to be a chance encounter, as we haven't heard many right coast stations lately.

Anyway, our best to you and Little Emmy.

72, Bob N6WG and Ol' Kenwood

Date: Fri, 31 Oct 1997 19:01:02
From: Steven Weber <kd1jv@moose.ncia.net>
To: qrp-1@lehigh.edu

Subject: [30045] Discret CA3028 how to
Message-ID: <3.0.1.16.19971031190102.26c760fc@mailhost.ncia.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

A couple of people have asked me what values to use in a discret 3028, so figure might as well post it here for everyone.

In a CA3028 there are two transistors that form a differential amplifier. The emitors are connected together and go to the collector of a constant current sink transistor. First the differential pair must be biased. This is generally done by placing the bias resistors on the center tap of a transformer. A 1.5K to ground (R1) and a 5.6K to 10K to 12 volts (R2) is a good start. Bypass the ct with a 0.1 ufd.

The current sink transistor has a 100 to 330 ohm resistor, (R3) bypass by a 0.1 ufd cap from the emitor to ground. The Base is biased by a 1K (R4) from base to ground and a 4.7K (R5) to the wiper of a 10K trim pot. One side goes to ground and the other to 12 volts. Now you can adjust the trimmer to give the best gain. The adjustment is fairly narrow, but now that I think about it, if the 4.7K were to be made larger, (say 10K to 33K) than there would be a wider adjusment range on the trimmer.

This is the best way to go, as now you can use the trimmer as a manual gain control. It also allows for variations in transistors, which may vary greatly from device to device or lot to lot. It also makes the other resistor values reasonably non-critical.

To use this configuration as a mixer, simply feed your L0 to the base of current sink transistor. About 1 v p-p is good. You will get good conversion gain and good isolation of the L0.

On the output side, you will need to connect a center taped transformer to the collectors. If it is to be a tuned circuit, I found that putting most of the capacatince from each collector to ground, instead of across the coil helps stability. Since you will most likely be winding the transformer on a toriod, a trimmer cap can be placed across the coil for tuning. It's probably be best to keep the input side untuned, unless it's a mixer. If you do tune the input, make that a sperate winding from the one that drives the base(s), which should be a relatively low impeadance.

To use this as a product detector, use a center taped audio transformer. Bypass the collectors to ground with 0.001 ufds.

There are ways to make this a single ended input/output, but keeing it push-pull will give you the best gain.

Hope this is understandable. It should be enough to get you going. Boy, I'm

starting to wish I had a page scanner and a web page!

72N2 2U2,
Steve, KD1JV....In the White Mountains of New Hampshire

"Melt Solder"

Date: Fri, 31 Oct 1997 18:52:57 -0500
From: "Wilford D. Lindsey" <70511.3041@compuserve.com>
To: QRP-L Discussion Group <QRP-L@Lehigh.EDU>, Doc Lindsey/K0EVZ
<70511.3041@compuserve.com>
Subject: [30046] RE:TS930--Thanks!
Message-ID: <199710311853_MC2-2655-9B96@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

Gang:

Thanks for so *many* who helped me retrieve the missing e-mail. This must be a computer problem. Both my laptop and HP200 palmtop crashed at practically the same moment. Lost all mail in the InBox (DOS software, too!). Also lost my Address Book in the Palmtop. Strangely, this also happened to my other CSERVE directory in the palmtop. Have a note running to CSERVE, of course. But this has been one *LLLL00000NNNGGG* day.

Anyhow, thanks again for outstanding assistance. What a great group.

72/73,
--Doc/K0EVZ qrp-l 861 norcal 2050 cqc 414 ARS 311 FISTS 3868 mn-qrp 19
nj-qrp 69 ak/qrp 139 AR QRP 73 ARCI 9398 ARRL WAS 48/40
DXCC 55/42 <>< FOX Total 10/31/97 10 of 11 + 8 of 9 N/T+ FOX.

Icom 751A Omni V Sierra Argo 515 Norcal 40a SW-40 49er 38S
Mercury Paddles Emtech ZM-1 MFJ 259 MFJ 941D GAP TNT/2 Windom
SLV/W6MMA G5RV Autek QF-1 RS DSP-40

"Things should be as simple as possible, but no simpler"--A. Einstein

End of QRP-L Digest 895
